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LAWN TENNIS
FOR TEACHERS AND PLAYERS
By MAJOR T. MOSS, O.B.E.
FOR
THE LAWN TENNIS ASSOCIATION

FOREWORD BY VISCOUNT TEMPLEWOOD



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FOREWORD

As President of the Lawn Tennis Association I am delighted to write a foreword to the official Manual on the art of teaching and playing Lawn Tennis.

Whilst tennis is played in this country by more people than any other game, the general standard of play is nothing like as high as it should be. The number of good teachers has been much too small, and very few young players have had the chance of learning the basic principles of the game. The object of the Manual is to explain the basic principles. No doubt there will always be varieties of style in applying them. I hope and believe that the advice that the Manual contains will be valuable not only to teachers of the game, but to many players who are anxious to know something of the theory as well as the practice of Lawn Tennis.

November 25, 1948.

AUTHOR'S NOTE

In compiling this official Manual on the art of teaching and playing Lawn Tennis, I wish to place on record my appreciation of the encouragement I have derived from discussions with many of my brother professionals, who attended the Courses of Instruction held by us at Cromer in 1947, 1948 and 1949.

I am especially glad to express my gratitude for the free exchange of views afforded me by Major R. H. Applewhaite, and Messrs. B. R. Lawrence and H. L. Smith, my colleagues working the National scheme inaugurated in 1946 by the Lawn Tennis Association for training teachers of the game, adding a special note of thanks to B. R. Lawrence for his very careful check on what I have written.

Above all, I would say "thank you" to my old friend, Dan Maskell, whose claim to fame as a player, student, and teacher of Lawn Tennis is known to all.

It will be a very real satisfaction to all of us who have endeavoured for so long to improve the standard of teaching and playing, if this Manual in any way helps British players to regain the highest international honours.

I take this opportunity of expressing my warmest appreciation to G.B. Instructional Films for permission to reproduce the illustrations of the Forehand and Backhand, and to L. A. Godfree and H. B. T. Wakelam and J. M. Dent & Sons, Publishers of *Lawn Tennis*, for permission to include the illustrations: Comparison of Service Action with Throwing Action and Low Volley—Forehand, and Low Volley—Backhand.

Finally, for the honour done by entrusting to me the task of compiling this book I tender my sincere thanks to the Council of the Lawn Tennis Association.

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EXPLANATION OF TERMS USED IN THIS BOOK

OPEN FACE RACKET.—The face of the racket is tilted back so that at the moment of impact with the ball the strings are inclined towards the sky.

SHUT FACE RACKET.—The face of the racket is tilted forward so that at the moment of impact with the ball the strings are inclined towards the ground.

THEORETICAL POINT OF IMPACT.—The point where the ball should be struck in relation to the body in order that it may go perfectly straight in desired direction.

EARLY BALL.—A ball which is struck in front of the theoretical point of impact.

LATE BALL.—A ball which is struck behind the theoretical point of impact.

RISING BALL.—A ball, which after bouncing, is struck before it has attained the peak of its bounce.

FALLING BALL.—A ball which after bouncing, is struck as it is descending from the peak of its bounce.

TOP SPIN.—The forward rotation of the ball on its axis in the direction of its track, imparted by drawing the strings of the racket up and over the circumference of the ball.

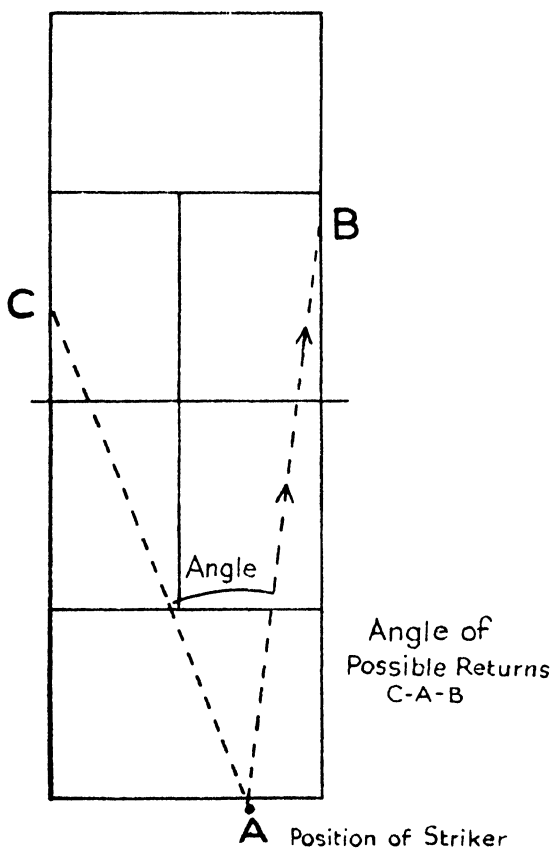
BACK SPIN.—The backward rotation of the ball on its axis in the direction of its track, imparted by drawing the strings of the racket down and under the circumference of the ball.

SLICE.—The lateral rotation of the ball on its axis imparted by drawing the strings of the racket across the ball from right to left, or vice versa. (Note.—The American twist service is a combination of Top Spin and Slice.)

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APPROACH SHOT.—A stroke off the ground made by a player when he intends to go forward to volley.

THE ANGLE OF POSSIBLE RETURNS.—When a ball is struck from any given point in the court, the angle made by lines drawn from that point to the extreme lateral points where the ball passing just over the net must of necessity go out, gives the angle of possible returns vide diagram :



CHAPTER I

NOTE.—Unless stated to the contrary actions as described are for a right handed player and for the Eastern grip.

ELEMENTARIES

A proper appreciation of and compliance with certain elementary rules are the foundations to playing Lawn Tennis properly. Ignorance, or neglect, of these rules leads to difficulties and nullifies any knowledge of the theory of stroke production a player may have. These rules are the elementaries of the game and are as follows:

- (a) Position during play.
- (b) Position of readiness.
- (c) Correct grip.
- (d) Keeping racket head above wrist.
- (e) Early start of swing.
- (f) Point of impact.
- (g) Normal height ball passes over net.
- (h) Intention.

Position During Play

The most difficult balls to play are rising balls, half-volleys, low volleys, and volleys at a distance from the net.

The area in which these difficult strokes are generally met is from just inside the base line up to approximately six feet inside the service line, and is properly regarded as NO MAN'S LAND.

The necessity for playing these difficult strokes arises from standing in NO MAN'S LAND instead of being either

behind the base line or sufficiently far up the court to be able to volley the ball at net height or above it.

On many occasions a player after striking the ball will be in this area and must get out of it before his opponent can return the ball.

The alternatives are to go forward or to go back giving the golden rule "Up to the net or behind the base line."

During a rally the occasion for regaining the back of the court or of going up to the net depends upon a variety of circumstances, so that there can be no hard and fast rule. As a rough guide it may be suggested that it is best to go back when a player is less than two thirds of the way up court between the base and service lines, and to go forward if more than two thirds of that distance.

The ideal position behind the base line is about three feet behind the centre mark. In this position the player divides into equal portions on each side of him the extent of court to be covered.

The factors affecting the advance to the net are more complex and will be explained in detail in Chapter V on volleying. Generally speaking a player going to the net should try to get within six to nine feet of it.

Position of Readiness

The term applies to the attitude assumed by the player when getting ready to receive the ball. The need for readiness is obvious and the manner in which it is met is important.

The attitude is one of eager watchfulness, alertness of body, hands and feet, all ready to play their part. The player faces squarely to the point from which the ball will come. His body is relaxed stooping slightly forward and his eyes fixed on the ball. The feet will be six to nine inches apart, the weight on the balls of the feet, heels just

off the ground and the knees slightly bent so that the player can move easily in any direction.

The racket is held half way across the body pointing down the court with the face in the vertical plane and about chest high. The right hand grasps the handle comfortably. The left hand holds the racket lightly between forefinger and thumb close to the throat keeping the head of the racket above the level of the wrist.

Thus held the racket is in a central position from which it can be taken to either side of the body with equal rapidity, whilst any tendency to hold the racket on one particular side involves a large movement to the other.

This centralization of the racket ensures a common starting point for all strokes and thus simplifies production. The return of the racket to the ready position after each stroke is therefore important.

Correct Grip

The type of stroke played is governed by the manner in which the racket is held since the angle at which the strings strike the ball depends on the grip.

There are three accepted variations of grip known as Eastern, Continental, and Western.

The Eastern grip, often called the "Shake Hands" grip, is the one most commonly used. It should be taught to beginners if they have no preference for some other grip.

To obtain this grip correctly the racket should be held by the left hand at the throat, the racket face in the vertical plane and pointing away from the body; the palm of the right hand is then placed flat against the strings of the racket and drawn backwards until the heel of the hand makes contact with the leather boss, the hand then closes on the handle as when shaking hands. The player will then be holding the racket correctly for a forehand stroke. This grip is suitable for service and for forehand volleys,

though most players prefer to make a small change by moving their grip slightly round to the left (anti-clockwise) when serving.

When playing a backhand stroke this grip is awkward and weak and has to be changed. This is done by turning the right hand about one quarter turn to the left so that the palm of the hand comes more on top of the handle. The thumb is placed diagonally across the handle and the fingers must be slanting towards the head of the racket and NOT directly across the handle.

Keeping Racket Head Above Wrist

The injunction to keep the racket head above the wrist holds good for ground stroke and volley alike.

If the racket head is dropped below the wrist during the back swing the player is at the disadvantage of having to play the ball low down near the ground. When the racket head is allowed to fall below the wrist during the forward swing the ball is automatically undercut.

Early Start of Swing

As his opponent strikes the ball a player becomes aware that his next stroke must be a backhand or forehand and must commence his swing on the appropriate side of his body at once. When the game is being learned only a minority of balls are hit hard, and a player may delay the start of the swing and yet have time to play the ball. When in due course faster balls have to be played such delay proves fatal. It is vital therefore that this matter of an early start to the swing is appreciated from the outset.

Point of Impact

Accuracy of stroke depends to a large extent on the player striking the ball regularly at the same spot in rela-

tion to the body, and that spot is referred to as the "point of impact" and is:

Forehand, about waist high, almost at full stretch of racket and arm and approximately in line with the leading foot. It is sometimes as far back as the buckle of the belt. Variations are due to differences of grip and of the type of stroke played.

Backhand, about waist high, almost at full stretch of racket and arm, and in line with or in front of the leading foot.

Normal Height Ball Passes Over Net

The height that a player sends the ball over the net is very often governed by the position of the opponent in the court. Against a volleyer it is necessary to keep the ball close to the top of the net.

When the opponent is at the back of the court, as more commonly happens in singles, it is desirable to make the ball pitch close to the base line. To accomplish this, when hitting with average force, it is necessary to lift the ball so that it passes over the net at a height of not less than three feet.

Appreciation of this matter of elevation is of importance since it safeguards against hitting into the net, reduces the physical effort in keeping a good length, and gives the opponent few opportunities of coming in to the net on short-length balls.

Intention

Every ball should be hit with a definite idea of the speed, height and direction it is meant to have and of the point on the ground that it is required to reach.

Casual striking of the ball results in a large percentage of errors owing to the limitations of the court and the height of the net.

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The desire for speed must not blind the player to the importance of being able to hit the ball softly as well. There are many occasions when the ball cannot be hit hard with any prospect of keeping it in the court. There are others when a softly hit ball will win the rally. Moreover, variation of strength helps to keep an opponent guessing and lures him into making mistakes.

Summary

The foregoing rules can be summarized in this sentence :— Stand in the right place, always be ready, hold the racket properly, be quick to start the swing, strike the ball properly in relation to the body, at a good height over the net, and always have some idea of where the ball is intended to go.

CHAPTER II

PRINCIPLES OF STROKE PRODUCTION

Lawn Tennis involves a great variety of strokes as the ball can be hit both after and before it bounces and can be struck on either side of the player. Further strokes can be made with and without spin, cut or slice according to the manner in which the racket is held as well as the intention of the player.

This variety of strokes produces no one style to the exclusion of all others, the widely differing styles of leading players proves this beyond doubt.

A careful study of first-class Lawn Tennis and the teachings by books on Lawn Tennis reveal the existence of certain basic principles common to all styles of stroke production.

These principles are :

- (a) Perfect balance.
- (b) Good footwork.
- (c) Control of the racket face.
- (d) Control of swing.
- (e) Watching the ball.

No matter what style is employed each of these principles is essential to the correct hitting of the ball. Collectively they make for that easy control of the ball which is the hall mark of good stroke production.

An understanding of the part played by these principles and of the errors which result from neglect of them help both player and teacher to assess the correctness of any stroke, to diagnose faults and to find the remedy.

Perfect Balance

All movement when playing tennis must be controlled, rhythmical and co-ordinated whether it be of feet, hands or body. This is only possible if the balance of the body is correct.

In acquiring perfection of balance the muscles and limbs must be relaxed, and tautness or stiffness, which restricts freedom of movement, must be avoided.

The feet have to move quickly to take the player to the required spot, neither an inch too much nor an inch too little. They must be able to stop, to turn or change direction easily.

The hands have a most delicate task to perform in making the racket face meet the ball at the right moment and with the face at the exact angle needed.

The eyes have to watch the ball without interruption so that a steadiness though not stiffness of the head and neck is necessary and is a noticeable feature with all good players.

The weight of the body plays an important part from start to finish of any stroke, particularly in respect of speed and direction of the ball.

Bad Balance

The clumsy player is so obviously wrong that nothing he does looks right. There are occasions when bad balance is not so obvious and can be detected only by a critical and understanding observer.

Slowness to start is often caused by standing "flat-footed" or with the feet too far apart.

Wrong application of the weight due to lack of balance causes a player to hit balls up into the air and also into the net.

The value of the body weight is lost when through bad balance it is applied too soon or too late.

When balance is lost the hands and arms are used

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automatically to restore equilibrium and this must interfere with the making of a stroke.

The instruction to "keep the eye on the ball" holds good for tennis as in golf. This is impossible if one is tumbling about.

Good Footwork

Correct footwork enables the player to take the ball consistently at the most suitable height from the ground and at the most favourable distance away from the body. To achieve this the player moves to a spot just behind and to the side of the place where the ball will reach the top of its bounce.

In this manner that accuracy and regularity of stroke are acquired which make the game look so easy.

Once the player is in the correct place the function of the feet is to ensure that the desired direction is given to the ball and that the weight of the body is properly distributed.

When a player stands facing square to the net (Diagram 1) the natural direction of the swing is across to the left of the court and not straight down it.

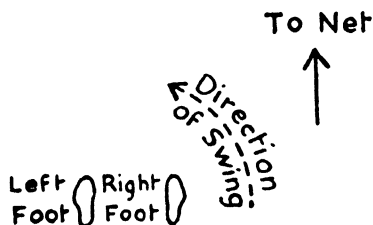
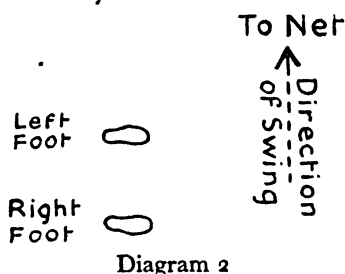


Diagram 1

If a player puts the weight of his body into a stroke when facing the net he must overbalance as there is no support to take the forward thrust.

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A sideways turn of the body with a readjustment of the feet (Diagram 2) will direct the swing straight down the court and bring the leading foot into position to support the weight of the body.



The placing of the leading foot must be perfectly timed or the player is liable to find himself immobilized before playing his stroke. The player will have difficulty in directing balls to the left of the court if he puts his leading foot too far over to the right when playing a forehand.

Part and parcel with this business of footwork is the actual stance whilst waiting for the opponent to strike the ball. The player must be ready to receive the ball on either side and must stand square to the point from which the ball will come.

Any tendency to face to the right will prejudice the backhand and vice versa.

The feet move in short quick steps so that the player can adjust his position exactly in relation to the ball.

All movements to the right whether forward or backward are commenced with the right foot, and those to the left with the left foot.

Bad Footwork

A player finds difficulty in striking the ball comfortably when his footwork is not good, at one moment he is too

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near and he is cramped, then he is too far away, now he finds the ball too high and then too low.

Failure to turn sideways results in a marked tendency to hitting across the court, to the left with the forehand and to the right with the backhand.

Inability to get the weight properly distributed during a stroke is often attributable to standing square instead of turning sideways.

Important as it is to turn sideways, movement is hampered when the player turns and adopts a fixed stance before reaching the correct spot for his stroke. The proper blend of turning and movement comes with practice.

Long strides are unsuited to the fine adjustments needed for perfect positioning in relation to the ball. They render the player liable to be caught on the wrong foot, and involve physical effort in stopping and changing direction so causing exhaustion.

Control of the Racket Face

At the moment of impact with the ball the racket face must have the exact inclination desired.

The "one stroke player" must be sure that the grip he employs is suited to the type of stroke he desires to play, and he must maintain that grip at all times.

When a variation of strokes is desired, as it will be in advanced tennis, the player must have a good knowledge of how to make the strings impart slice, spin, etc. To develop this skilled use of the racket the player must establish between it and his hand an intimacy such as might exist if the nerves were extended from the tips of the fingers to the centre of the racket.

The hold of the racket must be firm but not so tight that the wrist and arm become rigid.

A description of the Eastern grip has already been given. It is regarded as the standard grip because it is adaptable

for taking either high or low bouncing balls. This grip permits the use of great power and of hitting the ball either flat or with spin. The control of the ball with the perfectly flat drive is difficult and a slight degree of lift with top spin is usually imparted with the Eastern grip.

Western Grip

This grip is obtained by laying the racket flat on the ground and then picking it up. The hand will come approximately a quarter of a turn further to the right than with the Eastern grip. The Western grip is adapted to dealing with high bouncing balls and facilitates the imparting of top spin. It is, however, unsuited to taking low bouncing balls.

The backhand is hit with the same face as the forehand, the ball being hit with slice.

Continental Grip

This is almost the same as the Eastern backhand grip, but the turn of the hand to the left is rather less than a quarter turn.

To play a backhand stroke no change of grip is necessary. This is an advantage of the Continental grip. Another point in its favour is its suitability for taking a rising ball; this reduces the time taken to make a return stroke, gives the opponent less time to prepare for his reply, and expedites the player's approach to the net for volleying.

It is, however, difficult to play a rising ball and no one, unless possessed of a natural ability, should adopt the Continental grip. An unusually strong wrist is needed to maintain control on the forehand and to get pace off the ground. A tendency to get under the ball constitutes a further drawback to this grip and is particularly noticeable in dealing with high bouncing balls.

Placing the Ball

Whilst the placing of the ball is done by foot action it can also be done by wrist action. By angling the ball with the wrist it is possible to make shots which it is almost impossible to make in any other way, particularly so when volleying, and when speed is such that footwork is under pressure. Very acute angles can be obtained when the wrist is used but, considerable control is necessary.

Faulty Control of Racket Face

Lack of understanding of the manner in which the ball should be struck when a particular grip has been adopted is the cause of much erratic play.

Controlled strokes are difficult if a player keeps shifting his hold of the racket.

To get spin on the ball some rotation of the wrist is necessary, but excessive rotation leads to many errors.

If the racket is grasped too tightly the arm and wrist are likely to become rigid and strokes become laboured.

Slackness of grip allows the racket head to wobble, and control of direction and elevation are lost.

Control of Swing

The striking of the ball at the proper moment, the direction in which the ball is sent, the height the ball travels, and the variation in the strength of stroke, all depend on the swing of the racket.

The complete swing is composed of three main parts: the backswing, the swing forward, and the follow-through.

The Backswing

The start of the swing must be made immediately the player is aware of the side on which the stroke will be played. The speed and length of the swing are governed largely by the speed of the oncoming ball, being quicker

and shorter for fast than for slow balls. The length of the backswing for the forehand is normally such that when the player is sideways to the net the racket and arm are in line with the shoulders.

When a player takes too short a swing he develops a snatching action and loses control. An overlong swing results in wild hitting and a tendency to be late in dealing with fast strokes from the opponent. The swing is generally short when the ball is taken on the rise.

The swing back of all ground strokes can be made in two ways: (a) A circular swing, (b) a straight swing in the plane in which the ball is eventually struck.

The straight swing back is simpler, but power to impart speed may be lost.

It is a matter of choice whether the swing should be continuous or not. When continuity of swing is desired the circular method is used, and very exact timing is necessary.

Swing Forward

As the swing forward commences the racket must be in the plane in which the ball will be struck, or it may be slightly lower if it is intended to impart lift to the ball. The forward swing must not commence above the intended point of impact except when it is intended to impart back spin.

The arm and racket will be nearly at full stretch as they go forward.

The transference of the weight from rear to leading foot synchronizes with the swing of the arm so that at the moment of impact the weight is on the leading foot.

The racket face will be vertical or very slightly open as it contacts the ball.

The upper edge of the racket tilts slightly forward immediately after the ball is struck when top spin is imparted. Forward tilt must not be exaggerated.

Follow-Through

The racket rises gradually on the follow-through, the arm and racket go as far as possible along the line of flight of the ball and finish across the body with the racket head clear of and above the left shoulder when a fore-hand stroke is made. The weight goes forward with the stroke but the body must not overbalance.

Faults in Swing

Delay in starting the swing back gives the player little time to make the back swing, the stroke becomes hurried and lacks control; a common fault which is often the cause of inability to cope with fast balls from the opponent.

Over-swinging makes variation of strength difficult and encourages unnecessary hard hitting. It is often the cause of lateness in playing against hard hit balls.

When the racket does not start in the proper plane on the forward swing the player becomes aware that it is either rising under or descending on the ball, and the ball is untruly hit.

The racket is sometimes swung outside the point of impact owing to an exaggerated straight arm swing.

When this occurs the racket, on the forward swing, is drawn into the body and across the ball, slicing the ball and making it difficult for the player to make cross shots.

When the racket head is dropped during the backswing the player finds it difficult to strike the ball at any height from the ground and waits for it to drop low.

The ball must then be lifted considerably to clear the net; this gives the opponent plenty of time to prepare for the next stroke and to advance to the net.

When the head of the racket is dropped below the wrist during the forward swing it will undercut the ball, involving loss of power, imparting back spin and causing the ball to fly up in the air.

The increase of speed of the forward swing must be smooth from start to finish. Any check or sudden increase of speed results in loss of timing and of control.

The moment of impact is often chosen for increasing the force of the stroke, completely upsetting the rhythm, with most erratic results.

Players are sometimes over anxious about the follow-through of the stroke and hurry the arm and racket through without regard to actual contact with the ball, which is consequently not truly hit.

Watching the Ball

Watching the ball as long as it is in play is of vital importance.

There are four phases requiring special attention: (a) As the opponent strikes the ball; (b) as the ball bounces; (c) at the moment of striking the ball; (d) whilst the ball is going back to the opponent.

Immediate knowledge of the direction, height and speed of the ball is gained by watching the opponent make his stroke. The player can at once prepare for his next stroke. During a volley rally this watching of the ball as the opponent strikes is of special importance.

Either owing to some inequality of surface or because the opponent has imparted spin to the ball it does not always bounce as expected. The player must therefore watch the bounce for any deviation.

The properly timed stroke meets the ball at a certain spot in relation to the body and at a certain point in its bounce. The eyes must be concentrated on the ball after it bounces and until it reaches the desired spot.

Beginners may be advised to say to themselves "HIT" as the opponent strikes, "BOUNCE" as the ball meets the ground, and "HIT" as he himself strikes the ball.

Careful observance of the ball as it goes towards the

PRINCIPLES OF STROKE PRODUCTION

opponent provides some foreknowledge of the action he is likely to take.

Faults in Watching the Ball

Failure to watch the ball as the opponent strikes leads to slowness of preparation and causes hurried and uncontrolled play.

When a player does not watch the bounce of the ball he is liable to be taken by surprise if the bounce is not true and frequently finds himself out of position.

When taken by surprise the player makes indecisive strokes which lead to errors.

Timing of the stroke is spoiled when the ball is not carefully watched after its bounce, the player hits either too soon or too late.

The possibility of anticipating the opponent is lessened if the ball is not watched on its way to the opponent.

CHAPTER III

PRODUCTION OF GROUND STROKES

The correct production of the forehand, backhand, service, and volley is, in each case, a blend of the principles set out in Chapter II.

Although it is difficult to paint a word picture of several actions performed simultaneously, an attempt is made in the following pages to construct progressively the production of each stroke, and to call attention to some of the most common errors.

FOREHAND STROKE

As soon as the player knows that the ball is coming to his forehand he will start his swing and move into the best position. He will turn sideways to the flight of the ball and advance the left foot towards the net.

The weight of the body is gradually taken on the back foot as the racket swings back.

When the swing forward commences the racket must be in the plane in which the ball will be struck. The swing will be smoothly made and accompanied by a gradual leftwards rotation of the body. Simultaneously the weight of the body is transferred on to the leading foot. The ball is struck at almost full stretch of the arm, the grip is firm, and the racket face is vertical.

During the follow-through the arm and racket follow the direction of the ball and rise gradually from the point of impact. When the racket can no longer go forward it sweeps round to the left and ends with the racket head wide of and higher than the left shoulder.

FOREHAND

POINTS OF INTEREST

Purposely no attempt has been made to touch up the blurring in the action.

FIG. 1.—Perfect balance.
Commencement of turn to right.
Racket in ready position.
Grip for forehand.
Eyes watching ball.

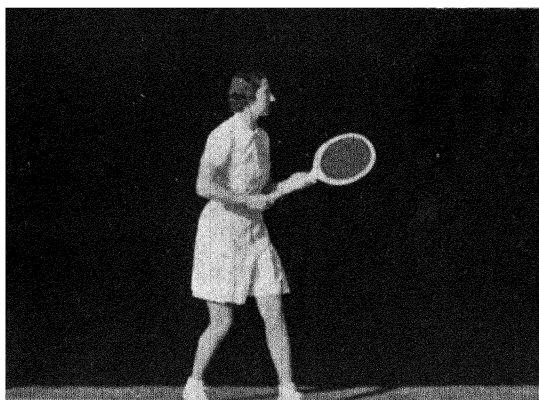


FIG. 2.—Perfect balance.
Turn to right continues.
Right foot preparing to take weight.
Feet taking sideways stance.
Racket on way back.
Eyes intent on ball.

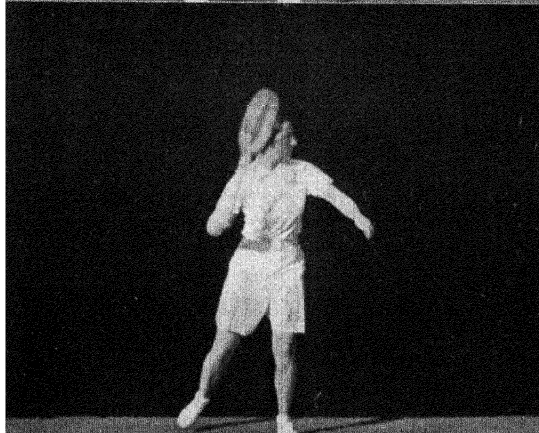
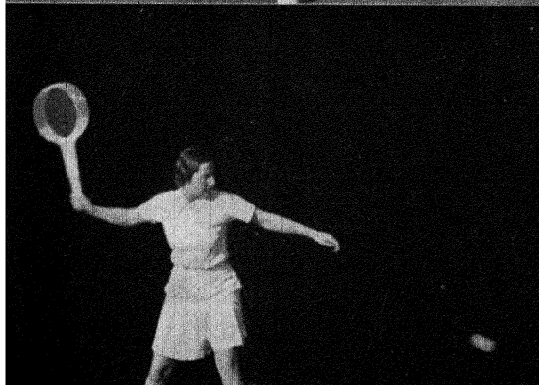
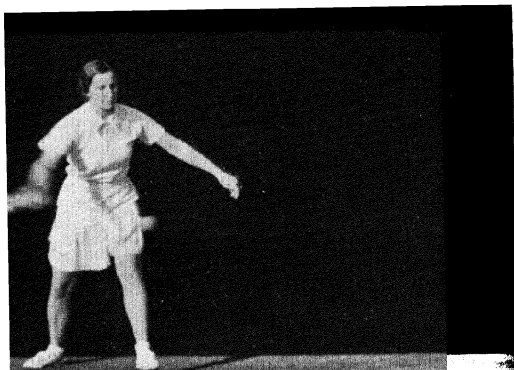


FIG. 3.—Perfect balance.
Turn to right completed.
Right foot supporting weight.
Feet have completed sideways stance.
Racket at full extent of backswing.
Eyes on the ball.





POINTS OF INTEREST

FIG. 4.—Weight transferring from right to left foot, but NO LOSS OF BALANCE.

Feet sideways.

Body turning towards net.

Racket *on way* to ball which has nearly reached point of impact.

Eyes still intent on ball.



FIG. 5.—Weight still coming on to left foot.

Balance undisturbed. Body continuing to pivot to net.

Feet sideways.

Eyes still intent on ball.

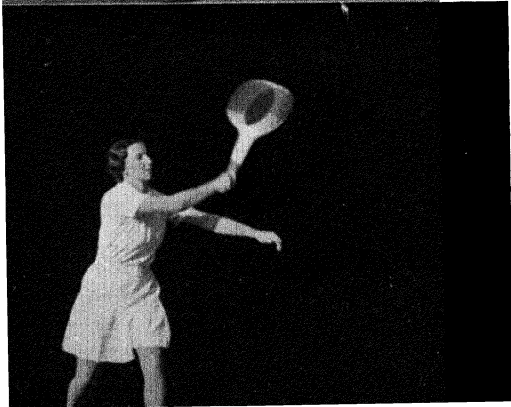


FIG. 6.—Weight on left foot accompanied by lift of body and chin, but balance maintained.

Feet still sideways.

Finish of racket.

Eyes still on ball.

PRODUCTION OF GROUND STROKES

During the follow-through the weight moves forward in the direction of the ball, the body being supported on the left leg whilst the right leg flexes at the knee with the heel rising from the ground thus eliminating any anchoring back of the body.

When the stroke is completed the body will have rotated until the player is facing square to the line of flight of the ball.

Common Errors

Bias towards hitting to left.—When a player finds it difficult to hit balls in any direction other than to the left he is generally committing one, or more, of the following errors: (a) The left foot is carried away to the left so that he is not sideways to the flight of the ball; (b) he is hitting the ball in front of the correct point of impact, i.e. too soon; (c) though hitting the ball at the correct point of impact the player is bending his wrist in to the left so that the racket face inclines that way; (d) he is checking the upper part of the arm and letting the arm break at the elbow; (e) he is swinging himself round as he strikes, so that though originally sideways to the net he finishes the stroke facing square to it.

Bias towards hitting to right.—Caused by the following errors: (a) Delaying the backswing; (b) striking the ball behind the correct point of impact, i.e. late; (c) letting the racket head lag behind the hand so that the face is inclined to the right; (d) placing the left foot too far across the court to the right; (e) beginning the forward swing with the racket head outside the line of flight of the ball so that it has to be brought "IN" and "ACROSS" the ball as it is hit; (f) being late in playing fast balls owing to excessive backswing.

Bias towards hitting too high.—The result of some of the following errors: (a) Letting the racket face tilt back as

the ball is struck; (*b*) letting the racket head drop and open just when the face meets the ball; (*c*) hitting the ball behind the correct point of impact; (*d*) allowing the ball to fall too close to the ground before striking it and then not stooping to do so; (*e*) pulling the weight backwards as the ball is hit, a common fault when players make their strokes facing square to the net; (*f*) snatching the racket head up quickly after impact and so not following-through properly.

Bias towards hitting into the net.—Many balls are sent into the net because the player is trying to hit them as close as possible to the top of the net. Common errors in production are: (*a*) Letting the racket face tilt forward before the ball is hit; (*b*) hitting the ball in front of the correct point of impact, due to overeagerness to hit the ball or to hitting too hard; (*c*) letting the ball drop close to the ground and then not imparting sufficient lift—this error is common to Western Grip players; (*d*) failure to realize that, when at the back of the court, balls are rarely high enough to be hit down, but such balls must be played with lift if they are to be sent over the net.

BACKHAND STROKE

Generally the same principles apply as for forehand. Special notice, however, must be paid to the liability of the body to interfere with the backswing. This calls for very good footwork and a decided pivot of the body to the left.

The position whilst waiting for the opponent to play is the same as for the forehand. As soon as he knows that the ball is coming to his backhand the player adjusts his grip, commences his swing and turns to the left, pivoting the body as far to the left as is possible without losing sight of the ball over the right shoulder. The feet will

BACKHAND

POINTS OF INTEREST

FIG. 7. Perfect balance. Sideways turn of body and feet commences. Racket above wrist. Eyes on ball.

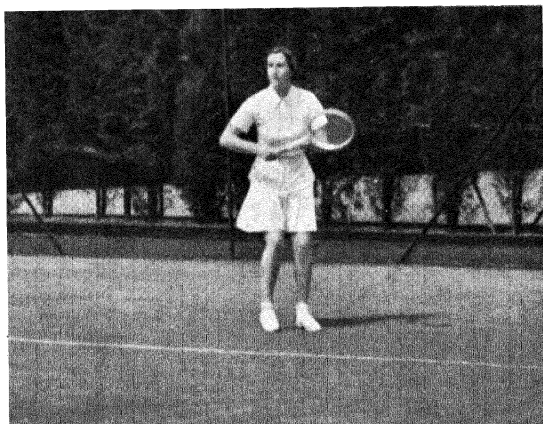


FIG. 8. Balance maintained. Weight being transferred to left foot. Backswing of racket commenced. Eyes on ball.

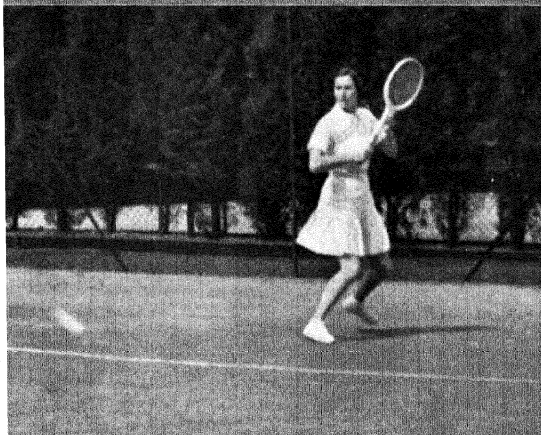
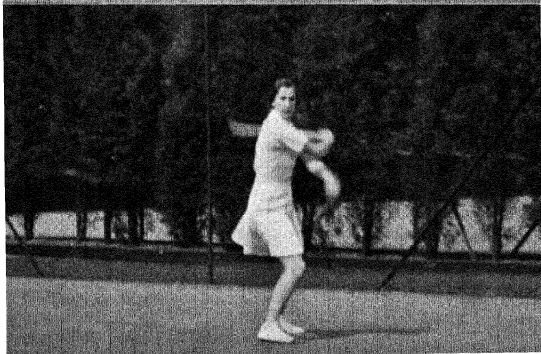
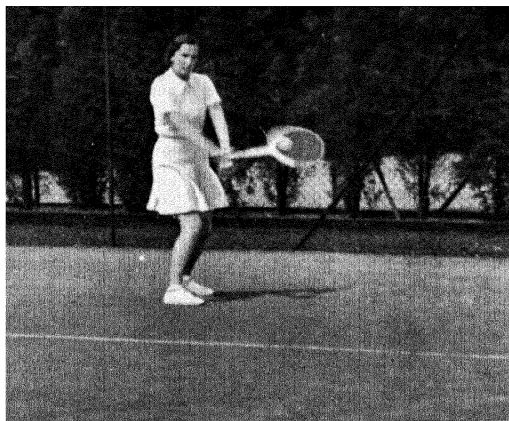


FIG. 9. Balance maintained. Weight on left foot. Feet sideways stance. Backswing completed. Eyes on ball which is nearing point of impact.





POINTS OF INTEREST

FIG. 10.—Balance maintained.
Weight coming on to right foot.
Feet sideways stance.
Body turning towards net.
Racket head in plane of ball.
Eyes on ball.

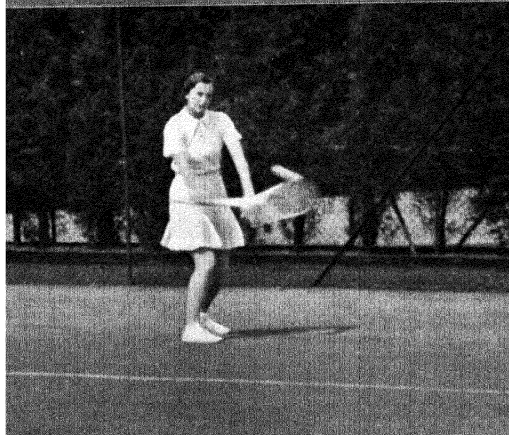


FIG. 11.—Balance maintained.
Weight on right foot.
Feet sideways stance.
Body still turning to net.
Eyes on ball.

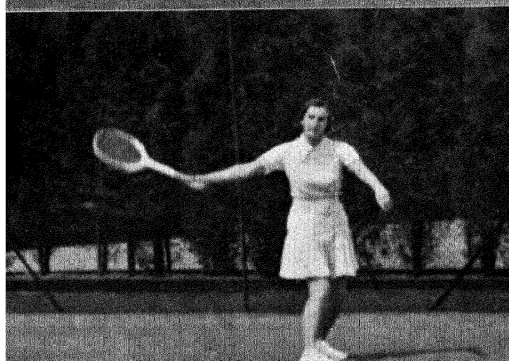


FIG. 12.—Balance still undisturbed.
Weight supported by right leg.
Feet unchanged.
Body turn completed.
Racket pointing down court.
Eyes on ball.

PRODUCTION OF GROUND STROKES

point to the side line, the right foot being advanced towards the net.

The racket meanwhile is swung well back behind the body, whilst the weight is supported by the left leg.

When the forward swing commences, the racket head will be in the plane in which the ball will be struck, or perhaps slightly below it. The swing is materially assisted by the pivot of the body to the right whilst the arm and racket swing well clear of the body (the swing may be compared to that of a door shutting, the hinge being at the shoulder).

The weight of the body comes on to the right foot just before the ball is struck and the right knee is bent.

The racket meets the ball in line with the front foot, perhaps farther forward, but never behind it.

The racket face is vertical except when top spin is required when it will close as the ball is struck.

The racket follows-through along the flight of the ball, gradually rising and sweeping round until the head points in the direction of the stroke. The body pivots round to the right until the player is almost in the ready position except the feet. The left leg is bent at the knee with the heel raised from the ground so that there is no check to the forward thrust of the body.

As soon as the stroke is completed the "Ready Position" will be resumed.

Common Errors (backhand)

General weakness of stroke.—Standing facing the net results in loss of power and of control of direction.

Failure to make a full pivot to the left during the back-swing reduces the swing and prevents proper use of the weight.

Bias towards hitting to the right.—(a) Player is facing square to the net when making the stroke. (b) The follow-through

is being forced ; this is often due to restriction of the backswing. (c) Bending the wrist so that the racket face inclines to the right. (d) Striking the ball in advance of the correct point of impact ; due to a restricted backswing. (e) Swinging the body round as the ball is hit so that at the finish the player is facing the net with the feet pointing down court.

Bias towards hitting to the left.—Often due to : (a) Hitting the ball late ; (b) letting the racket head lag behind the hand so that the racket face inclines to the left ; (c) putting the right foot too far over to the left and even behind the left foot.

Bias towards hitting too high.—(a) A most common fault and *one very easily detected* is that of letting the racket head drop below wrist level during the forward swing. (b) Letting the racket face tilt backwards when meeting the ball ; a weak grip is often responsible. (c) The weight of the body falls back as the stroke is made. (d) Pulling the racket head up quickly instead of following-through correctly. (e) Failing to stoop to play a ball which is close to the ground. (f) Putting increased force into the stroke during the follow-through.

Bias towards hitting into the net.—(a) Lack of power due to restricted backswing. (b) Hitting the ball too far in front of the correct point of impact—the player generally overbalances forward. (c) Allowing the racket face to “shut” before meeting the ball ; sometimes the result of a loose grip and sometimes of an exaggerated rotation of the wrist for the purpose of imparting top spin. (d) Hitting the ball too close to the top of the net.

Special Hint for Correcting Backswing

The emphasis laid on the importance of the backswing will no doubt have been noted. Even after this has been

PRODUCTION OF GROUND STROKES

stressed players still have difficulty in getting a good backswing. In such cases it will often be helpful to advise that the ball be struck with a stabbing movement which aims to get as much force as possible into the first part of the swing and checks the follow-through. If this is practised a sound backswing can be acquired and the follow-through will come quite naturally as the stroke improves.

CHAPTER IV

SERVICE

This is the one stroke in lawn tennis where the player is in absolute control since the opponent cannot interfere in any way. The initiative is therefore with the server and must not be sacrificed by an indifferent service.

A variety of services have resulted from this freedom of action, but there are only three which are in general use: (*a*) The flat service; (*b*) the sliced service; (*c*) the American twist service.

The flat service is most generally used and is a good foundation for the others. The grip can be the normal Eastern grip, but is generally modified in the Continental direction.

The main desiderata of the service are speed combined with accuracy of placing. The flat service is best suited to meet those demands, but has the one disadvantage that the margin of error between striking the net and overshooting the service line is comparatively small, even for tall players. This has caused players to use the flat service for the first delivery and to have recourse to some form of spin service for the second delivery so that the danger of double faulting may be lessened.

The need for spin services does not entirely rest on the security aspect but also on the need for variation, which can be used to surprise and embarrass an opponent by alteration of speed and bounce.

It is necessary to realize that spin without speed is useless. The mere fact that the ball breaks in an unusual fashion may embarrass the bad, or average player, but

will prove ineffective, indeed suicidal, if served to any good player.

The production of the service involves two distinct actions, that of throwing up the ball with the left hand, and that of the racket carried out by the right hand.

To describe the production of a service properly it is necessary to deal with each of these actions separately, always remembering that it is the perfect synchronization and co-ordination of them which results in a correct service.

The position assumed by the player will be as near as possible to the base line without risk of touching it with the feet.

The body will be sideways on, so that the left shoulder is pointing roughly to the centre of the court to which the service is directed. The left foot is placed in positions varying between almost parallel to the base line, and at an angle of 45° to it.

The right foot is about twelve to eighteen inches behind the left, depending on the height of the player. An imaginary line joining the toes of the feet, if projected will point in the direction to be taken by the ball. The weight is balanced on the balls of both feet.

The left hand holding the balls will be slightly higher than the waist and brought across the body till directly under the spot to which the ball is to be thrown.

The racket is held in front of the body with the head pointing to the court into which the ball will be sent, the cross strings are vertical to the ground and quite close, sometimes touching, the balls in the left hand.

The ball is thrown up sufficiently high for it to be struck at a height which permits the arm and racket to be at full stretch at the moment of impact. Some players throw the ball to the exact height required and others throw it higher and allow the ball to drop to the required spot.

When thrown up correctly in relation to the body and if permitted to fall without being hit the ball will contact the ground just in front and to the right of the leading foot.

To attain this accuracy of throw-up the initial position of the left hand should be directly under the spot to which the ball is intended to go. The hand must make a definite throwing motion starting downwards towards the ground and then lifting smoothly in the required direction and going well up into the air past the head. When the throw-up is made with a short jerky movement correctness in attaining height is extremely difficult, whilst a pushing action starting without any initial movement towards the ground rarely achieves any height at all.

As the ball is thrown up the body pivots slightly to the right, the weight of the body goes on to the right foot, while the racket is carried downwards and backwards at the full length of the arm rising behind the body until the upper part of the arm is in line with the shoulders.

At this moment the swing changes to a striking movement and the action of the hand and forearm is similar to that of throwing. The swing of the upper part of the arm continues unchecked and is reinforced by the return pivot of the body to the left, whilst the player rises on his toes to his full height so that his weight is going upwards as well as forwards when the ball is struck. The hand and racket describe a partial loop behind the head whilst the forearm straightens out vertically until the racket is brought up to the maximum height of reach and slightly to the right of the head so that the arm swings clear of the body. The centre of the racket must not be climbing at the moment of impact but comes from well behind and slightly over the ball.

The ball will be struck just in front of the body and consequently the racket head will have just commenced

Comparison of
SERVICE ACTION WITH THROWING ACTION

Attention is called in the marginal notes to the SERVICE action in particular.

POINTS OF INTEREST

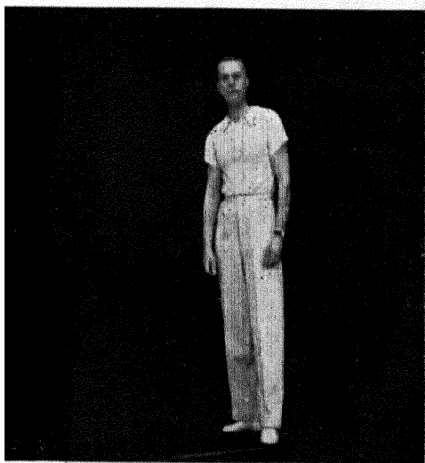
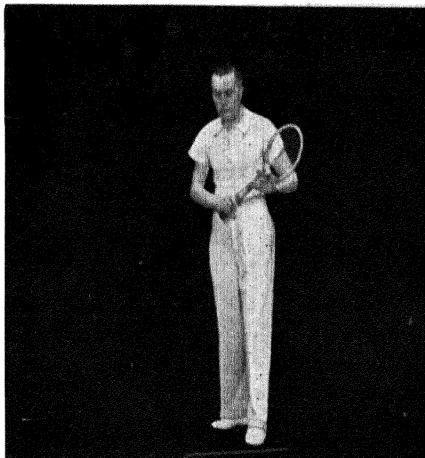
Even balance.

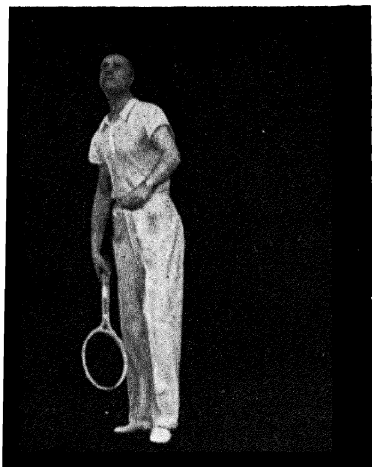
Sideways position of feet and body.

Racket pointing in direction of service.

Balls held close to racket.

Eyes observing that foot is not on line.





Weight going back.
Body pivots to right.
Racket swinging down.
Downward drop of left hand.
Head lifting.
Eyes looking up.



Weight still going back.

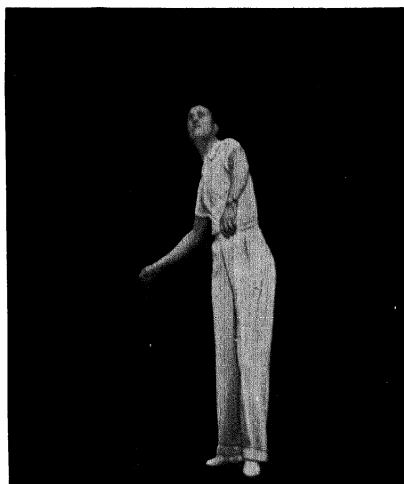
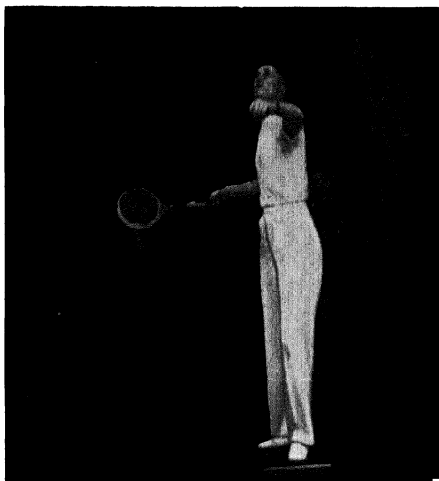
Body pivot continues.

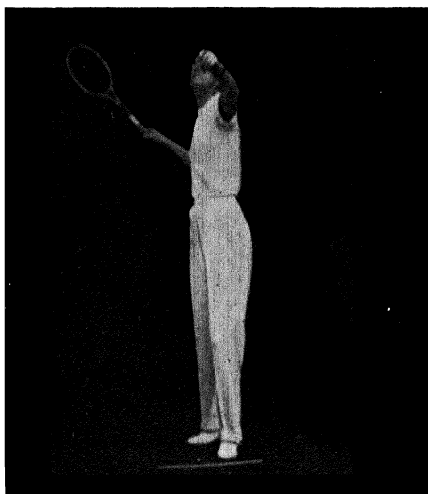
Racket starts to lift.

Palm of hand turning outwards.

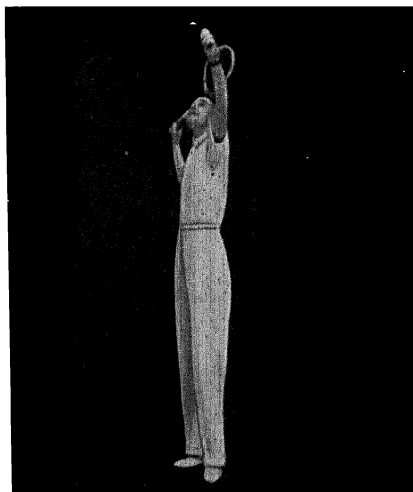
Left hand rising.

Head still going back.



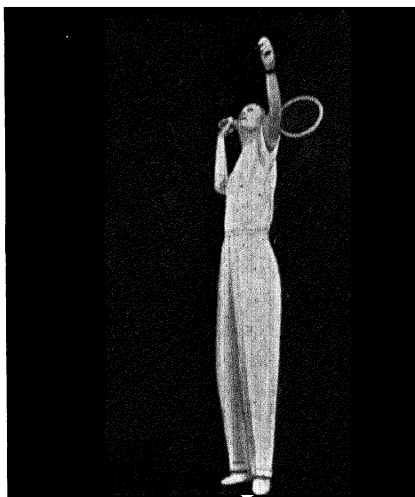


Weight well on back foot.
 Body pivot almost complete.
 Racket still rising.
 Palm of hand still turning out.
 Left hand still rising.
 Head still going back.

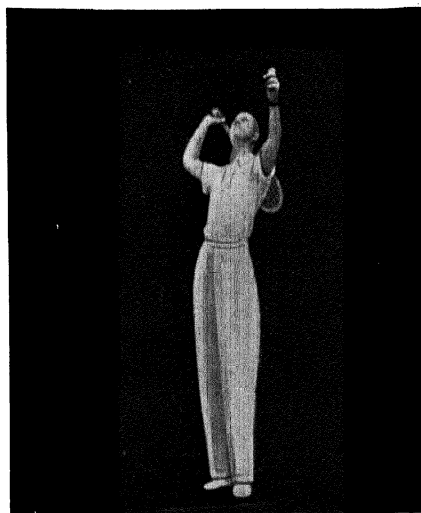


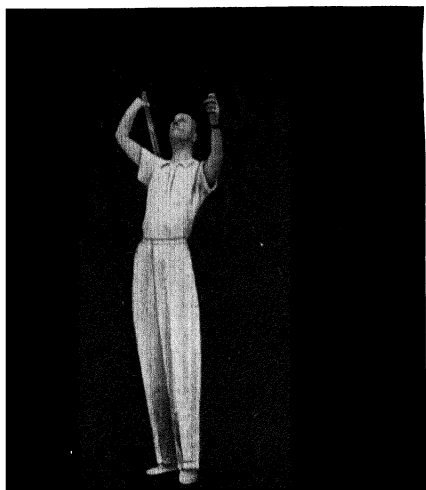
Weight still on back foot.
 Body pivot complete.
 Racket head is dropping below
 wrist.
 Palm of hand faces outwards.
 Left hand well up.
 Head further back.

Weight still on back foot.
First sign of return pivot.
Racket head still falling.
Arm bends—elbow does *not*
drop.
Left hand starts to come down.
Head further back.



Back has hollowed.
Body pivoting to left.
Racket head at lowest point.
Palm of hand faces sky.
Elbow still up.
Left hand coming down.
Head coming forward.
Eyes on ball.





Body stretched up.

Weight begins to leave right foot.

Body pivoting to left.

Racket rising.

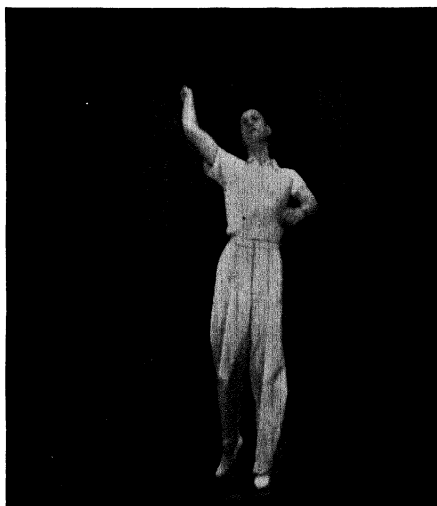
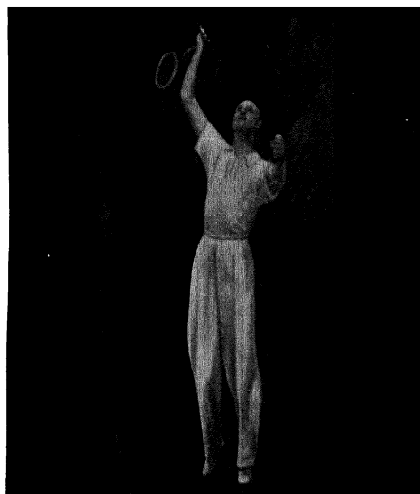
Hand coming outside of head.

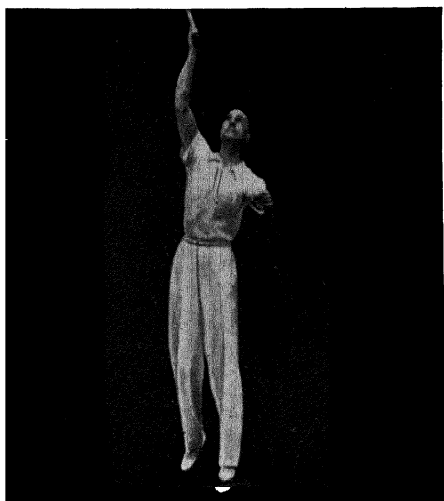
Elbow rising.

Left hand coming down.

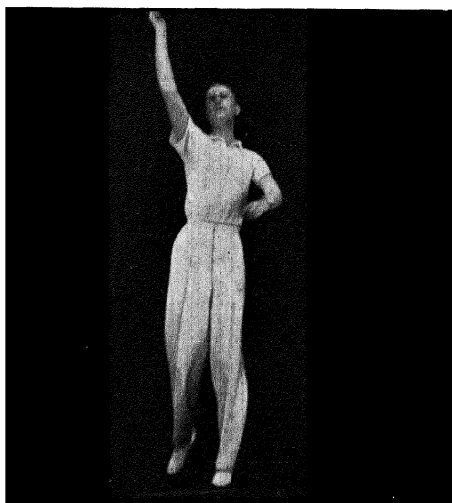
Eyes on ball.

Body reaching up to pivoting.
Weight on left foot.
Right heel leaving ground.
Racket rising outside wrist.
Arm straightening.
Left hand lower.
Eyes on ball.





Pivot completed.
Weight on left foot.
Body bends forward.
Racket almost vertical.
Arm nearly at full stretch.
Left hand still descending.
Eyes on ball.



MOMENT OF IMPACT

Pivot has been completed.

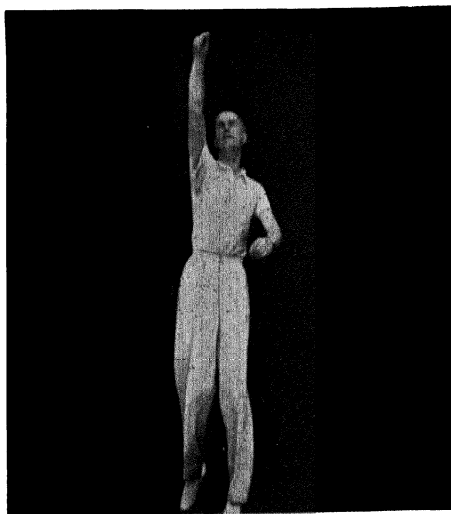
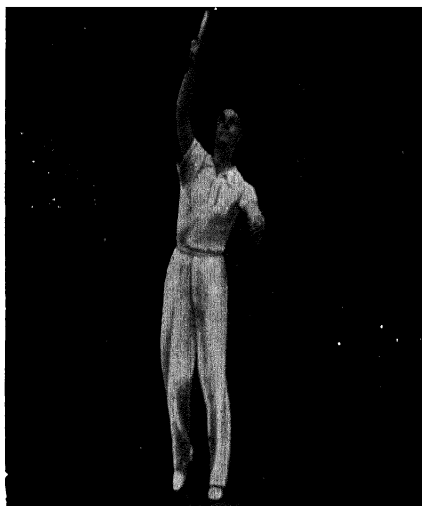
Weight on left foot.

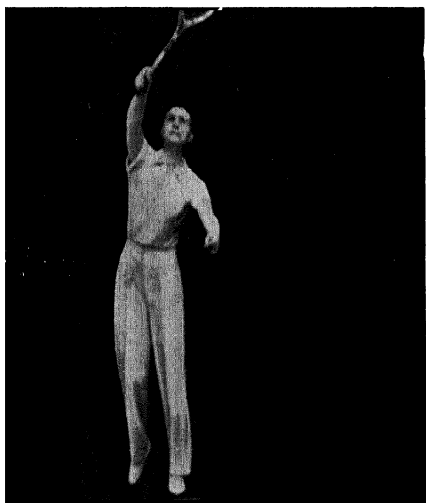
Bend of body continues.

Arm and racket fully extended.

Left hand still falling.

Eyes on ball.





Weight forward.

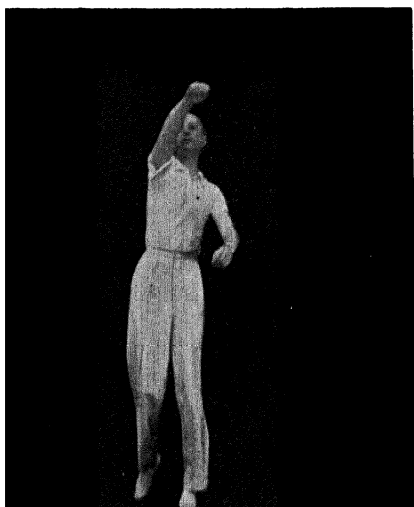
Body starts to drop.

Racket coming forward and down.

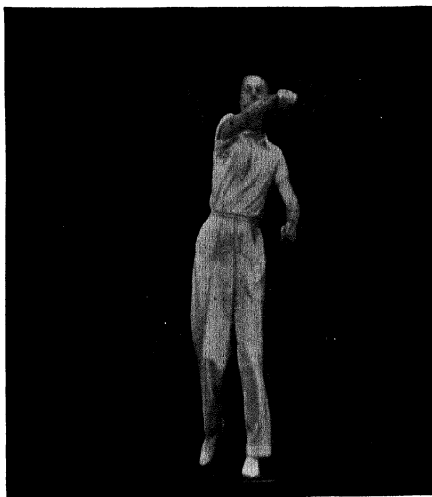
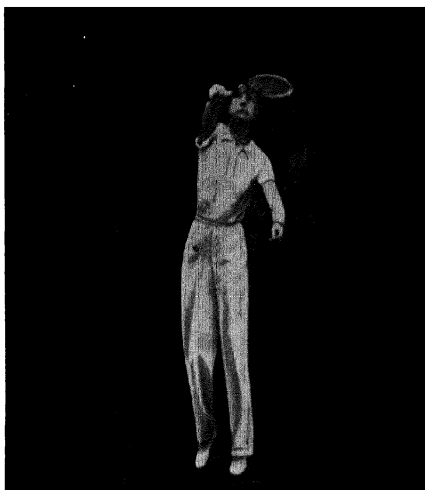
Arm still extended.

Left hand lower.

Eyes follow ball.



Weight along flight of ball.
Body at normal height.
Racket lower but along flight
of ball.
Arm still extended.
Left hand still dropping.
Eyes follow ball.



SERVICE

its downward movement so that the face of the racket will be inclined slightly towards the ground.

This tilt automatically increases as the racket goes forward, or can be deliberately increased as may be desired by bending the wrist.

The short player will hit the ball with the racket face almost vertical owing to the small margin of clearance over the net at his disposal.

After impact the racket arm and shoulder follow forward as far as possible along the line taken by the ball, the racket finally finishing downwards and across the body about knee high. During the follow-through the body continues to pivot until facing the net.

The right foot may swing forward off the ground thus facilitating any forward movement towards the net, or if kept on the ground will be raised on the toe with the knee flexed to give freedom to the rotation of the body.

COMMON ERRORS IN SERVING

Incorrect placing of the feet.—Failure to realize that the positioning of the feet has an important effect on the direction taken by the ball; this generally leads to the mistake of standing facing square to the court.

Neglecting to resume the correct position when failure of the first service necessitates a second. The habit of playing the second service in a hurry is often the cause.

Standing square to the net.—Apart from the matter of direction mentioned above, a player facing the net for the service is unable to get the weight of the body into the stroke, or to make the racket follow-through on the line of the service. The whole stroke consequently tends to become a push and lacks force.

Incorrect throw-up.—The ball may be thrown too high, too low, too far back, too far forward and too far to a side.

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Incorrect throw-up.—The ball may be thrown too high, too low, too far back, too far forward and too far to a side.

When the ball is thrown too high the player has to wait for it to come down and in doing so checks or stops the swing of the racket thus spoiling rhythm and losing force.

When the ball is thrown-up too low the player has no time to develop his swing which thus becomes short and hurried, involving loss of power and control. Moreover, since it is impossible to strike a low ball with a downward blow with any expectancy of sending it over the net, the player is inclined to push the ball upwards and in so doing destroys all chance of striking the ball forcefully if the service is not to go over the service line.

When the ball is thrown up too far forward the player must reach out to play it. In so doing there is a strong tendency to foot-fault either by stepping on to the line, by walking forward or by swinging the right foot over the line before the ball is struck.

There is also a tendency to hit the ball into the bottom of the net because when the racket contacts the ball too far in front of the body the racket face has a marked tilt towards the ground.

When the ball is thrown to either side of the true point of impact the swing of the racket must deviate from its true course making it impossible to bring the weight of the body into the blow, which generally becomes a slice lacking both force and control.

Failure to lift the body to the ball.—When the server does not lift himself on his toes towards the ball he is striking, the blow loses a great deal of force as the weight is not going behind the stroke but much of it is wasted into the ground.

The importance of this lift of the body is not appreciated by many players and is the cause of that lack of power to serve which they try to remedy in many other ways.

Lack of backswing.—Some players commence their service by taking the racket almost directly up to the point where

the ball will be struck, or shorten the backswing by dropping the upper arm against the side; the result is entire lack of punch as would be the case if in striking a nail the hammerhead were initially placed in direct contact with the nail head.

Hitting downwards.—Careful observation of good services makes it quite clear that the greater part of the blow is delivered outwards towards the other court and that the downward movement is limited at the point of impact.

Failing to appreciate the true action some players emphasize the downward movement as soon as the racket contacts the ball and in consequence a large proportion of services go into the net. When such players eventually realize that more elevation is required they not infrequently try to obtain it by tilting the face of the racket backwards, this is merely “falling out of the frying pan into the fire” as many of the services will then fly over the service line.

Incorrect timing.—An erratic service is often the result of the application of extra force just when the racket meets the ball. Any speed that is needed must be acquired smoothly and gradually commencing early in the swing.

Bias towards hitting to the left.—The follow-through of the racket must go as far as possible along the flight of the ball, but very often an obsession about the finish to the left causes players to bring the racket round leftwards immediately contact has been made.

An even more common cause of failure to hit the ball straight is that of bringing the racket head up on the left (or inside) of the hand and forearm during the swing up to the point of impact so that on arrival at that point the racket face travels from left to right across the ball thus slicing it away to the left.

When the swing is correct the racket head will be seen

to approach the ball from directly behind it or from the outside.

This action is acquired by developing a true throwing action in which the palm of the hand is turned outwards to the right as the forward movement commences.

Inclination of racket face.—A very great difference in giving direction results from a small alteration of the racket face from the true position in relation to the hand, so that it inclines either to left or right.

Any carelessness about or slackness in the grip causes the ball to go astray from the desired direction to a surprising extent.

Wrong use of weight.—Through anxiety to get power into the stroke the player often throws the weight forward in advance of the racket and not behind it, the value of the weight is then lost to the stroke.

As a general rule when this occurs the ball will be hit downwards.

THE SLICED SERVICE

This service in execution resembles the flat service in most respects. The main differences are in the throw-up and the action of the racket head on impact.

The throw-up is usually slightly more to the right, but not so far as to prevent the player getting his weight behind the ball and at the same time to bring the racket face round outside the ball and finally across towards the left to impart the desired spin. Sacrifice of speed is the direct result of the application of spin but greater control of the ball is possible. When the ball touches the ground it breaks away to the receiver's forehand (note: the server's racket finishes on his left).

THE AMERICAN TWIST SERVICE

This service differs from those previously mentioned in that the ball is thrown up over the left shoulder, and even

SERVICE

slightly behind the player. The racket face is brought inside of and over the ball and finishes out to the right of the server.

To deliver this service the player hollows his back to a marked degree during the swing back and drops the right shoulder together with the upper arm.

On contact with the ground the ball kicks high and breaks sharply to the receiver's backhand.

This service is of great value to a player who wishes to advance to the net behind his service whether playing singles or doubles.

FOOT-FAULTS (Rules 6 and 7, et seq.)

Players must take great care not to transgress the rules regarding foot-faults so that they may neither gain an unfair advantage, nor run the risk of being repeatedly penalized, or penalized at a critical moment, an experience which can prove extremely demoralizing.

The rules may be simply summarized as follows:

(a) When preparing to serve do not touch the base line with either foot.

(b) Do not move a foot on to the base line when serving.

(c) Do not jump.

(d) Do not swing the rear foot over the base line before the racket strikes the ball.

(e) Do not stand outside the proper limits, i.e. the imaginary continuations of centre mark and side line.

(f) Do not walk about.

LADIES' SERVICE

As has already been stated the action of throwing plays a large part in service production.

Ladies generally do not play games which develop this

action, and consequently experience difficulty in learning the overhead service. The solution of this difficulty is to persevere in practising the action of throwing. The danger of "throwing out" the arm must not be overlooked and the object used for this throwing practice must be sufficiently heavy to obviate that danger.

The most common mistake in throwing is to turn the palm of the hand to face straight down the court whilst the arm is coming up from behind the shoulder.

When the hand commences its forward movement the palm should be turned outward to the right.

The whole motion must be initiated with the hand and forearm; when the throw is commenced with the upper arm and shoulder it develops into a pushing movement which gives little impetus to the racket head.

There is no doubt that any girl or lady, who practises assiduously on the correct lines, can master the technique of the orthodox service.

When for any reason this is impossible, an alternative service is offered by the reverse service, *not the American twist*.

To produce this service the player alters the grip slightly to the Western. The ball is thrown as high as possible but more forward than usual, and the player faces more directly to the net.

The swing of the racket is similar except that, instead of the loop inside the wrist at the end of the backswing the racket head is dropped outside the wrist. Impact is made by the racket face striking the ball behind and passing inwards to the left, the racket finally finishes off to the left of the player.

The throwing of the ball more forward than usual gives time for the racket to gather speed and a very severe service can result. On striking the ground the ball tends to swerve to the left of the receiver.

SERVICE

The main objection to this service is that the margin of error between the top of the net and the service line is reduced by the necessity for throwing the ball forward.

CHILDREN'S SERVICE

It is most important that the foundations of the service should be laid correctly. Bad habits once acquired are very difficult to eradicate.

Children starting the overhead service are prone to hit up under the ball and they assume a wrong grip to enable them to keep the ball straight. The desire to hit up is generally due to lack of physical strength to get the ball over the net without doing so. The deciding factor as to learning the overhead service is therefore whether the child is able to get the ball over the net when striking in the correct manner.

All children are anxious to commence the overhead service, but should be dissuaded from doing so where necessary. It is as well to stress the dangers involved and to point out that a well-controlled underhand cut service can prove very valuable especially when the sun is straight in the server's eyes, or on a very wet court.

CHAPTER V

THE VOLLEY

The volley is an essentially attacking stroke and must be regarded as such.

Even in singles the day of the pure base liner is out of date. It must not be inferred that ground strokes are of no importance. Nothing could be further from the truth as good ground strokes are needed to pave the way to the offensive which will be carried to a successful conclusion by volleying.

Any attempt to advance to a volleying position on weak ground strokes will prove disastrous.

This combination of ground stroke and volley is modern tennis at its best, and is referred to as the ALL-COURT game.

In past years teaching has generally commenced with ground strokes only and has ignored the volley until proficiency in the former has been attained. This has led to ignorance of volleying technique and even to an inferiority complex about it.

Ground strokes and volleying must be learned at one and the same time.

The essence of good volleying is that the ball is hit so hard and deep, or so well angled, that the opponent has little chance of intercepting it. This will be difficult if the ball is not higher than the net when it is struck. It follows therefore that the player must be well up to the net.

This forward position furnishes an additional reason for hitting the ball firmly as the player will be in danger

THE VOLLEY

of being lobbed or passed if the ball is put gently back into the court.

All three grips can be used for volleying. The Eastern grip is most suited for the task of hitting without slice, though the Continental grip is preferred by some because no change of grip is necessary for backhand volleys.

The Continental grip is well suited for playing low volleys and half volleys, but not so suitable for high volleys as there is a tendency to hit under the ball and impart back spin.

The Western grip has been successfully used for high volleys but is unsuited for low volleys. Players often find difficulty with this grip and it is best avoided.

In all cases the grip must be firm and the wrist almost rigid. Any tendency of the racket head to wobble is thus prevented and speed of stroke is assisted by the force of the oncoming ball.

The volleyer intercepting a ground stroke from the opponent must be six to nine feet from the net. A tall player can without risk be closer to the net than a short player because of his greater reach in dealing with lobs. It is, however, possible to get too close to the net when the player will be in danger of taking the ball before it has crossed the net, or of striking the net as he makes the stroke.

When playing doubles the distance of the players from the net varies from time to time, but on the average will be about twelve feet. The governing factor is time to see and to prepare for the next stroke.

The approach to the net must be made quickly but carefully. A wild rush forward invites a lob and makes it difficult to change direction sideways or to go into reverse. On the other hand if the volleyer remains in mid-court his opponent will be able to direct the ball at his feet.

The forward move must therefore be made with quick

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well-balanced steps so as to be able to intercept the ball before it gets below the level of the net, but not so far forward that the player can be easily lobbed. This advance will be greatly facilitated if it is made behind an approach shot which has both speed and depth.

The action of the feet and body is the same for volleying as for ground strokes, but the action is less deliberate as the time for the stroke is brief.

When exchanges between volleyers are very rapid, perfect footwork becomes impossible and great importance attaches to the rotation of the body to the appropriate side.

The volley is not made with a swing like a ground stroke, but is more like a hammer blow. The take-back of the racket is lifted and short. The follow-through is much less pronounced than when driving.

The racket face comes down on the ball and slightly across and meets it well in front of the body.

The racket head must be kept above the wrist throughout the stroke. Low volleys are played by stooping the body and bending the knees, and not by dropping the racket head.

Shoulder-high volleys are sometimes played with the "drive" volley when the swing is similar to that of a ground stroke.

BACKHAND VOLLEYING

The action of the backhand volley is similar to the forehand—a brief take-back and follow-through.

The grip must be firm and the wrist and forearm tense. Much of the motive power is generated by the right side and shoulder.

The positioning of the feet and in *particular* the pivot of the body to the left are very important. Without them the stroke will lack power and control.

The racket face meets the ball fully without imparting slice.

THE VOLLEY

DEFENSIVE VOLLEYS

The preceding paragraphs have assumed that the player could intercept the ball above the net so that he could hit down on it.

Since the opponent will try to keep the ball as close to the top of the net as possible there will be many occasions when the volleyer will have to give the ball lift to get it over the net, and at the same time take care not to hit it out. It will not be possible to do this using the same degree of force as when hitting down on the ball. Low volleys therefore have a defensive quality, but must be played with sufficient firmness and direction to harass the opponent if not to defeat him outright.

When making a low volley the turn of the body sideways is very important as are the stoop of the body and the bend of the knees to allow the hand and racket to get down to the required level.

The racket face is "open" and the strings are drawn down across the ball to impart back spin.

When the racket face is "opened" to the minimum extent which will lift the ball over the net a low volley can be executed with very little back spin and can be returned with surprising speed and yet be kept in court.

On occasions when the player has not time to hit the ball in front of him he has to play it level with or passing his body, and must impart slice to the stroke to ensure that the ball will stay in the court.

As has already been pointed out the defensive volley can be a winning volley, but the slice imparted will always reduce the speed of flight through the air and slow the ball off the ground. An active opponent will be able to retrieve this type of stroke, and the player should aim to give the ball as much depth as possible.

When playing a defensive volley care must be taken not to put the ball back into play half way down the court.

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In this connection Donald Budge says, "seek for depth and pace rather than risky angles and drop volleys; these are only effective if your opponent is so far away that he will not have time to reach them. Any time that you get a ball above the net that permits you to hit down, lay into it and do not gamble with short angles or drops."

Fear of being passed.—Many players are unduly anxious about being passed down their side line. Their whole attention is focussed on this possibility and they fail to influence the play of the opponent or to assist their partner. It is no more than the truth to say that the volleyer does not exist who has not been passed on occasions.

COMMON ERRORS IN VOLLEYING

Failure to hit down on high balls.—Generally due to taking the racket back in a lower plane than that in which the ball is eventually struck and not raising it well above that point.

Allowing the ball to begin to drop before hitting it.—Caused by ignorance of the importance of intercepting the ball, if possible, whilst it is rising.

Hitting too soon.—Caused by fear of being too late, inspired by the short time given to make the stroke as compared with the ground strokes.

Standing too close to the net.—Being afraid of striking the ball before it has crossed over the net, or of hitting the net, the player gives ground as the ball comes to him—the stroke lacks power and is frequently hit up.

Dropping the racket head.—A common mistake when playing low volleys. The ball is "undercut" and rises steeply.

Standing too far back from the net.—The player has to deal with an undue proportion of low volleys and half volleys. He is also easily passed on either flank.

Facing square to net whilst hitting.—The player has difficulty

LOW VOLLEY—FOREHAND

Sideways stance.

Right shoulder drops.

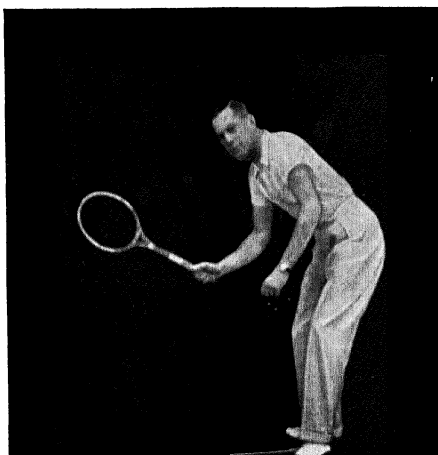
Bend at waist and knees *before*
ball arrives.

Racket head up.

Wrist firm.

Forehand grip.

Eyes on ball.



Right shoulder low.

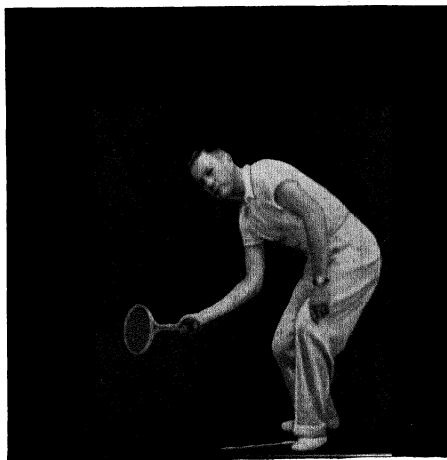
Bend at knees and waist con-
tinues.

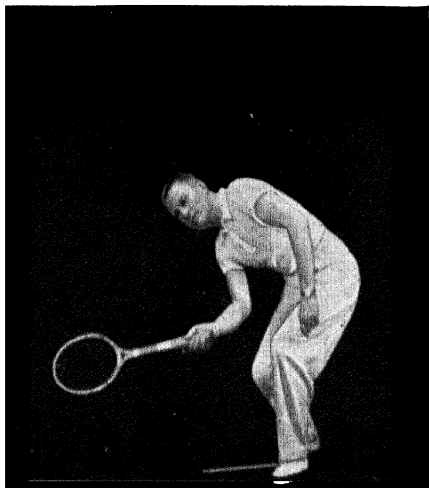
Body pivots on hips.

Weight coming on to left foot.

Racket and hand well down.

Eyes on ball.





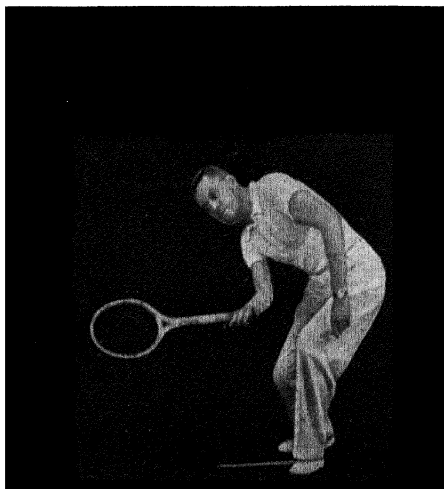
JUST BEFORE IMPACT

Bend of body and knees complete.

Right shoulder well down.

Weight more forward.

Eyes seem to be looking too far down court.



IMPACT

Weight well on front foot.

Right heel coming up off ground.

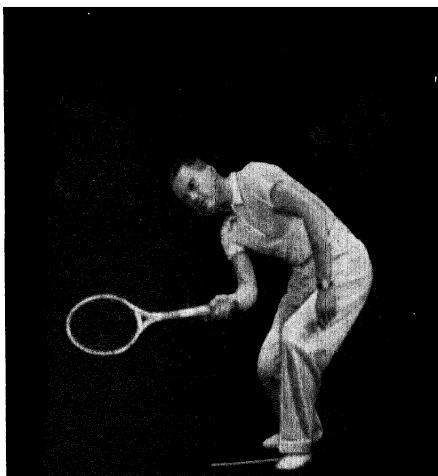
Eyes on the ball.

Body coming forward.

Lift of right heel more pronounced.

Wrist still firm.

Eyes on ball.



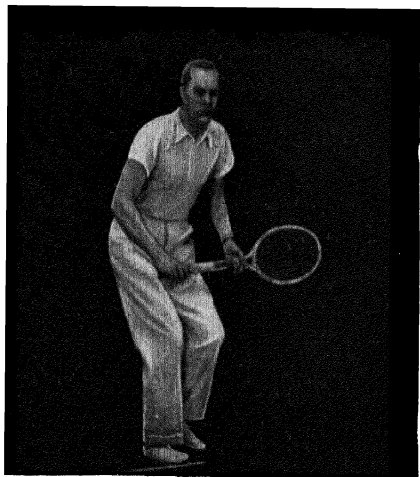
STROKE COMPLETE

Body just beginning to lift
(perhaps too soon).

Wrist is relaxing permitting
racket head to fall.

Eyes follow ball.





LOW VOLLEY—BACKHAND

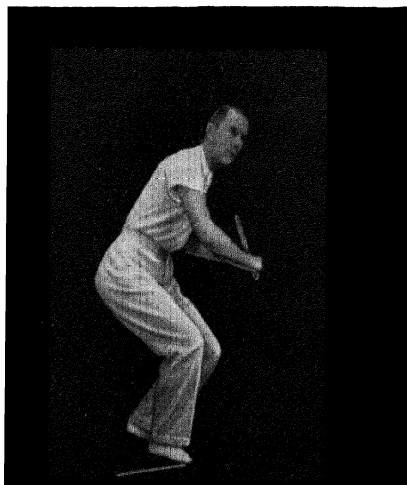
Player turns sideways.

Left foot goes back.

Body bends at knees and waist
before ball arrives.

Left hand supporting racket.

Eyes on ball.



Sideways turn complete.

Left foot in position on ball
of foot.

Bend of body and knees con-
tinues.

Racket back.

Wrist firm.

Eyes on ball.

Weight well on right foot.

Body moving forward—no
marked pivot.

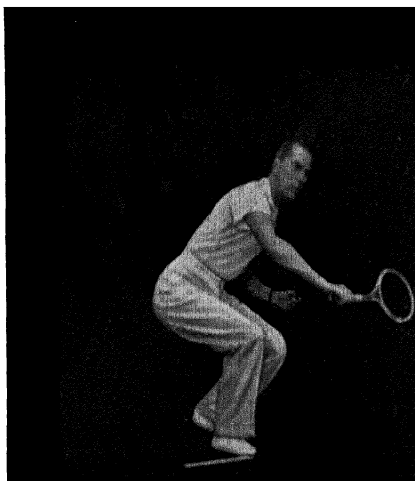
Bend of body and knees nearly
complete.

Arm and racket straighten out.

Racket and hand in plane of
ball.

Backhand grip visible.

Eyes on ball.



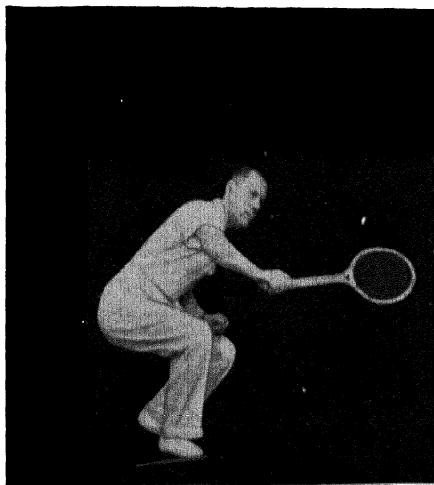
JUST BEFORE IMPACT

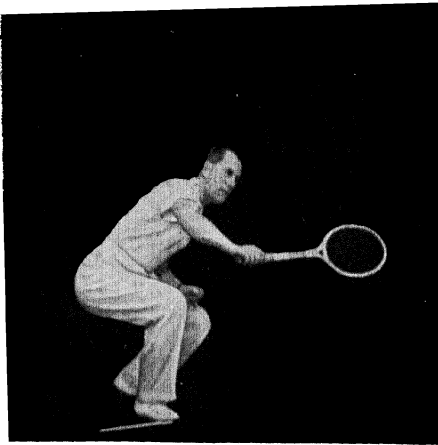
Crouch completed.

Balance perfect.

Racket head well up.

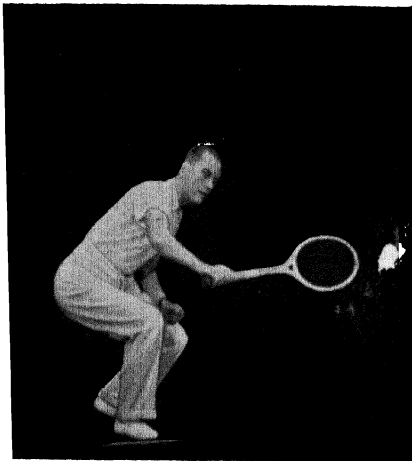
Eyes on ball.





MOMENT OF IMPACT

Position unchanged.
Head steady.
Eyes fixed on ball.



STROKE COMPLETED

Body turning and lifting.
Eyes do *not* appear to be
following ball.

THE VOLLEY

in placing balls other than across the court. Attempts to direct the ball elsewhere often result in mishitting.

Bad footwork.—Except during a rapid exchange of volleys, or when the ball comes very fast, there is time to place the feet sideways for the appropriate stroke. Failure to do so cramps the stroke and makes placing difficult.

Delay in stooping.—When making low volleys, players are inclined to stoop just as, or just after, the ball is struck instead of prior to contact of racket with ball. The whole value of stooping is lost and the racket head comes down on the ball.

The pushing stroke.—Beginners are liable to put the racket head directly to the spot where the ball will be met and to “push” it back on arrival. The stroke lacks punch and whenever an attempt is made to place the ball to a side it is frequently struck with the wood.

THE SMASH

The smash is a volleying stroke made to deal with balls that have been hit high over the player.

Properly executed it should be a winner by virtue of speed and placing.

Though similar in appearance to the service there are several differences. In the service the ball is thrown up where the player wants it, the player does not have to move but has to direct the ball into a limited part of the court. The would-be “SMASHER” on the contrary has to move as occasion demands, has to judge the flight of a variety of lobs, but has the whole court to put the ball into.

Some players use the same swing for service and smash, but not all. The extra time given for smashing entails delay at some time in the preparation of the stroke.

Players affected by this fact generally use a shorter swing for smashing and so get more control.

To execute a smash the player must get under the ball so that it will fall slightly to the side and in front of the

right shoulder. Care must be taken not to let the ball get far behind the head.

The movement into position is made with a sideways turn of the body and a "slide and skip" step.

After reaching the correct spot the player crouches slightly with bended knees putting the weight on the rear foot. As the striking movement starts, the weight is lifted up on the toes of the rear foot to enable the player to rise on tip-toe. The racket arm straightens upward and forward to the full extent of the reach, whilst the weight is transferred on to the toes of the leading foot and the rear foot swings up off the ground.

The blow can be either flat or sliced, the former imparts greater speed and is therefore to be preferred.

After impact, the racket, arm and shoulder follow the line of flight of the ball as far as possible and finish across the body as it does in the service.

Whilst finishing the stroke the player bends in at the waist drawing the weight slightly back, this prevents over-balancing forward.

The smash is sometimes executed by jumping up to meet the ball, but timing and control are more difficult.

When the player is between the net and the service line he has a good chance of making an outright winner by smashing downwards. Between the service and the base line the danger of hitting into the net is greater, and it is better to rely on depth and placement, but any temptation to pat the ball must be resisted.

When the player finds that he cannot get correctly placed under the ball he must let it fall thus gaining time to position himself better and to hit the ball after it has bounced.

COMMON ERRORS IN SMASHING

Failure to get into the correct position.—Very often players get the mistaken idea that there is no time to get into

THE VOLLEY

position and merely reach out with the racket and so allow balls to pass over them.

Failure to turn sideways.—Results in clumsy footwork leading to lack of power and of control of direction.

Raising the racket over the head too soon.—As soon as the ball goes up into the air the player lifts the racket with arm at full stretch above the head, with the arm in this position he finds it difficult to move and when the ball comes into reach he can only strike it with a pushing movement.

Sacrificing speed to safety.—When players find difficulty in both hitting hard and placing they are inclined to sacrifice speed and concentrate on placement thus yielding up the initiative.

Incorrect method of giving direction.—Direction of the smash is largely a matter of footwork and the follow-through. Bad smashing is often caused by turning the racket face too soon in the direction to which the ball is to go and then hitting across the ball.

Too early use of the weight.—In the desire to get every ounce of strength into the stroke players are inclined to throw the weight forward long before the racket makes contact with the ball. Control of the stroke is lost and the ball is more often than not sent into the bottom of the net.

Striking the ball behind the head.—When this occurs the player finds that he is likely to hit up under the ball and to counteract that possibility he inclines the racket face forward to keep the ball down, it is difficult to obtain any degree of accuracy by this method and a large number of errors result.

Allowing the ball to drop too low.—The player at once becomes aware of the danger of hitting the ball into the net and is concerned to get the ball over as best he can. Under such circumstances the ball should be allowed to drop and be played after it has bounced.

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POSITIONING AND PLACING

Perfect production of the volley stroke does not of itself ensure success.

The volleyer is always taking the risk of being passed since it is physically impossible to cover the whole of the court to either side, and there is always the possibility of being lobbed.

To safeguard himself as far as possible from being passed the player must:

(a) Position himself so that he leaves the minimum space on either side uncovered.

(b) Direct the ball in such a way as to make the passing stroke difficult for his opponent.

At the centre of the net it is possible to cover all but a foot or two on either side; this therefore is a sound position except when the approach shot has to be angled and then the volleyer has to move more to the side to which the ball has gone. To be more precise, if this question is examined carefully it will be found that the ideal position is on the bisector of the angle of possible returns to be made by the opponent.

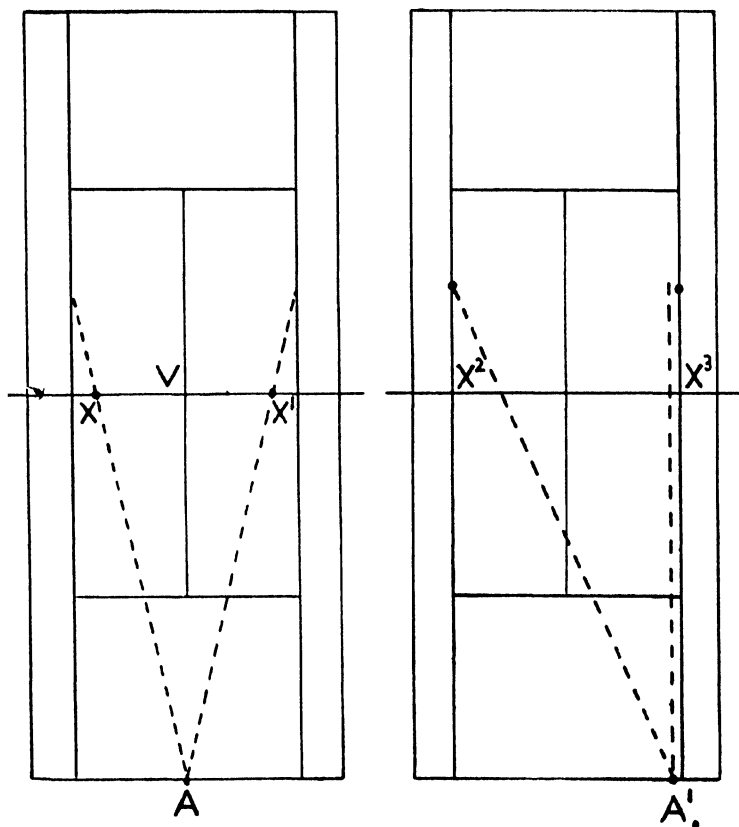
Thus Diagram 1 shows that the volleyer V at the centre of the net, i.e. on the bisector of XAX^1 has an equal space to cover on either side. If, however, he remains at the centre of the net when the angle of possible returns is $X^2A^1X^3$ (Diagram 2) he will leave more space on his left than on his right; whilst by moving to his left till he reaches the bisector of $X^2A^1X^3$ then he will divide the space X^2X^3 into equal parts.

Reference to Diagrams 1 and 2 also show that when the opponent is playing from the centre of his base line the space over the net available to him $X-X^1$ is less than X^2-X^3 when he plays from the extreme end of the base line. It is therefore desirable for the approach shot to be

THE VOLLEY

directed to the centre of the court provided always that the volleyer can reach the centre of the net.

As regards the actual advance of the volleyer towards



Diagrams 1 and 2.—The angles are approximate.

the net reference to Diagram 3 shows that if the approach shot be played from V² the shortest way to the net is to X¹ at the centre, it will therefore be advantageous to send the ball to A¹ rather than to A or to A², both of which involve longer movements, i.e. to X and X² respectively.

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When, however, the approach shot is played from V^1 , the shortest distance to the net is V^1-X , and it may be

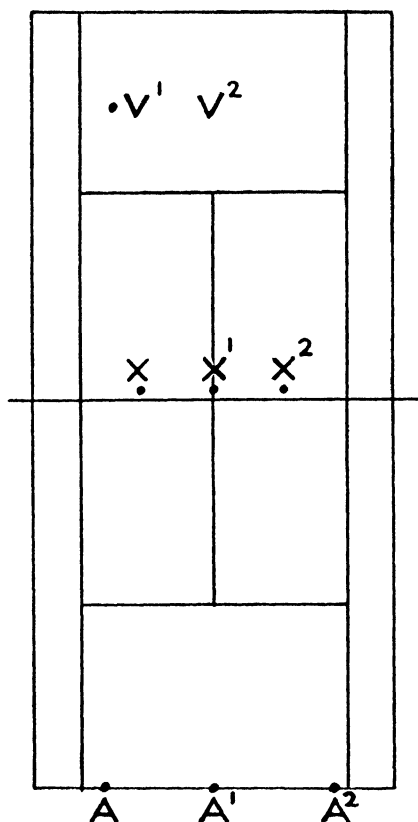


Diagram 3.

impossible for the player to reach X^1 or X^2 before his opponent has made the return stroke.

Moreover, a player moving fast from V^1-X^2 is liable to be caught on the wrong foot if the ball is returned to the side from which he is coming.

THE VOLLEY

Under these circumstances if he directs the ball from V¹ to A the player gains by having the shorter distance to go whilst giving his opponent a large area for passing him.

These are the main considerations affecting the volleyer in developing his attack. There are many occasions when the situation calls for different tactics, and no hard and fast rules can be laid down.

So far the examination of this question has referred to passing shots, the possibility of being lobbed demands attention, but must not be permitted to deter the would-be volleyer from advancing to the net.

A careful watch on the opponent's actions will discover his intention to lob in ample time to enable the volleyer to prepare himself.

HALF VOLLEY

The term "volley" is misleading as the stroke is the act of hitting the ball as it begins to rise from the ground.

It is such a risky stroke that it should never be played by choice.

The production is similar to that of the ground strokes. The player must stoop more, and the swing back and follow-through are less pronounced except when the stroke is played from the back of the court.

When the stroke is played near the net the racket face must be open or the ball will go into the net, but at the back of the court the racket face is partially closed to keep the ball from rising too quickly.

When the opponent is at the net the half volley is a very dangerous stroke to play. When, however, the opponent is at the back of the court the half volley from near the service line may be used to enable the striker to advance to the net. But half volleys near the service line should not become a habit encouraging the player to advance slowly to the net instead of as quickly as possible.

CHAPTER VI

THE LOB, CHOP-SHOT AND DROP-SHOT

A lob by virtue of trajectory is a defensive stroke as compared with a drive or volley intended to win by speed and placing.

The trajectory of the lob—projecting it into the air—is enforced by the need for returning the ball out of reach of an opponent already at the net or advancing to it. The purpose behind the lob may be to force the opponent to abandon his position at the net, to gain time to recover position when under pressure, to break up the rhythm of a rally, to embarrass a player who smashes badly and to pass over a player rushing wildly to the net.

Chiefly then the lob is defensive but on occasions, to be elaborated later, it can be employed offensively, with every prospect of winning the point outright.

The opportunity for the **PASSING SHOT** in singles is much greater than in doubles, whilst the task of intercepting a smash in singles is far more difficult than in doubles since the area to be covered by one man is proportionately greater.

The lob is consequently more sparingly used in singles. In doubles the lob is a means of dislodging opponents from the net and thus securing the initiative. Its use therefore in doubles is more general than in singles.

The lob is produced in a similar manner to the ground stroke as regards disposal of feet and body, the back swing generally being slightly restricted. The racket is brought forward in line with the ball until impact is almost achieved when the speed of the racket is slightly reduced

THE LOB, CHOP-SHOT AND DROP-SHOT

and the follow-through is taken in an upward direction. The point of impact is usually rather farther back than that of the normal ground stroke. Played in this manner the intention to lob is disguised to the last minute.

The impact of the racket with ball can be made in three ways:

(a) hitting under the ball with an open-faced racket without any spin.

(b) Striking behind and slightly under the ball with an open-faced racket so that back spin is imparted.

(c) Striking behind the ball and allowing the face to come up over it on the lifting follow-through, thus imparting top spin.

The method described in (a) is most easily anticipated and dealt with by the opponent and is to be avoided.

Method (b) should be used when the object is to gain time as the ball can be tossed higher and stays longer in the air by virtue of the back spin. The extra time gives the opponent more opportunity to deal with it and this stroke is consequently of a defensive nature.

Method (c) when correctly played passes out of reach of the opponent forcing him back and the ball tends to run away after it has pitched.

Accurately played at the correct moment method (c) produces an outright winner.

The apparent simplicity "of the business of lobbing" is deceptive. Great delicacy of touch and judgment of height and length are required as considerable risk attaches to a stroke which is a certain loser if badly made. The height and depth of each stroke varies with the distance of the player from the net and the position of the opponent. The lob can be made with advantage from inside the court as well as from the base line if it is remem-

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bered that the ball will have to be made to rise more steeply.

It must be clearly understood that the lob should only be employed against an opponent who is well forward towards the net. To lob a player hanging back from the net not only asks for trouble, but is sacrificing the chance of embarrassing him with a low volley, or half volley, at his feet.

The lob is not only a ground stroke it can also be played on the volley when it is termed a "lob volley." Rarely used in singles it is a powerful factor in doubles owing to the large element of surprise involved, especially against opponents crowding the net. The most suitable occasion for this stroke is when dealing with low volleys which would otherwise be difficult to get over the net without giving opponents an opportunity to hit down.

COMMON ERRORS IN LOBBING

Concentration on pitching the ball on the base line to the neglect of giving adequate height to the ball results either in putting the ball within reach of the opponent or of over driving the limit of the court.

Keeping a minimum height. The desire to give the opponent as little time as possible to deal with or overtake the lob induces a tendency to leave no margin of safety in the height of the ball.

Cutting out the backswing. Obsessed with the idea that no force is needed for a lob, players are inclined to "ladle" the ball into the air, using the hand and racket only, thus eliminating the use of the upper arm and body. The stroke lacks control and power, and is obvious to the opponent.

Looking up before contact. Failing to keep the eyes on the ball as it is struck results in mistiming. The desire

THE LOB, CHOP-SHOT AND DROP-SHOT

to see the ball going up over the opponent must be resisted.

Lobbing to an opponent not up at the net. A player who is being kept on the defensive is liable to have recourse to lobbing almost automatically and without regard to the actual position of his opponent. When this happens the advantage of having displaced the opponent from the net is lost.

THE CHOP

The characteristic of the CHOP is that the striking motion is made with a CHOPPING or HAMMERING action and not with a swing as in the drive.

The positioning of the feet and rotation of the body are largely the same as with other ground strokes.

The take-back of the racket is short and lifted—coming approximately in line with the right shoulder, the racket head being kept above the wrist. The blow is made with a forward and downward motion reinforced by the upper arm and shoulder. Contact is made with the ball in line with the left foot on to which the weight is transferred just before the ball is struck.

The face of the racket is inclined backward at the moment of impact striking behind and under the ball. Some players alter the grip towards the Continental grip for this stroke. The follow-through is less pronounced than with the drive and finishes across the body slightly below the left hip.

When struck in this manner back spin is imparted to the ball which rises as it leaves the racket, loses speed as it goes through the air and on striking the ground keeps low.

Owing to this tendency to rise and lose speed the chop-shot is not suitable as the foundation of an all-court game, since it is difficult to keep the ball close enough to the

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top of the net to embarrass a volleying opponent. This difficulty is particularly noticeable with strokes played from the base line.

The ability to play this stroke can prove valuable as a means to breaking up an opponent's game by the change of speed, of flight and by the lowness of the bound.

Played forcefully from the forecourt and placing the ball near the opponent's base line the chop can be employed most usefully as the approach stroke for an in-going volleyer.

The tendency of the ball to keep low is emphasized on grass and damp courts when the ball is liable to skid so that the chop can be exploited to great advantage.

On courts possessing a solid surface the effect of the spin is lost and the stroke is liable to become innocuous.

DROP-SHOT

Strokes which are played so that they fall into the opponent's court a very short distance from the net and then keep close to the ground are termed "drop-shots," they may be played forehand or backhand either as ground strokes or volleys, especially low volleys. The volley drop-shot is often called "STOP VOLLEY".

In times that are past this stroke was regarded as unsporting: in modern tennis it takes the place which its effectiveness and the difficulty of its execution deserve.

The action of the arm and racket can be either that of an underhand stroke or of a small chop-shot. The aim of the player is to impart as much back spin as possible by passing the strings of an open-face racket behind and under the ball, this ensures that on striking the ground the ball will "sit down."

To play this shot without back spin, or with top spin, is inviting disaster as the opponent will have little difficulty

THE LOB, CHOP-SHOT AND DROP-SHOT

in making a winning return off a ball which does not keep low after bouncing.

It is of great importance that the ball should meet the ground as close to the net as possible. This can often be achieved by angling the stroke instead of playing it straight down the court.

This combined need for maximum back spin but minimum forward propulsion makes the drop-shot a most delicate stroke to play correctly.

When a ball has been forcibly struck by the opponent the drop-shot is effected by killing the speed of the ball by meeting it with a "dead" racket and a rigid wrist, combined with a very restricted downward motion of a slightly open-face racket. The surprise value of the stroke is then very great and executed at the right moment often proves an outright winner.

When dealing with slower balls the action, however well concealed, is more obvious and the element of surprise is proportionately reduced.

The most favourable opportunity for exploiting the drop-shot is when the player himself is not far from the net with his opponent far back or well outside the court. Generally speaking to play a drop-shot one should be inside the service court.

The playing of drop-shots from the back of the court requires very great accuracy if the ball is not to fall into the net or so far into the opponent's court that it gives him a "sitter." Moreover, since it must of necessity be slow of flight an active opponent will get to it without great difficulty.

It is therefore sparingly played from far back in the court except as a means of drawing an opponent up to the net. It can also be used in combination with lobbing to run an opponent up to the net and back to the base line with the intention of exhausting him.

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In doubles one of the opponents is generally within reach of the net and the drop-shot can only be used on rare occasions.

A player called upon to deal with a good drop-shot is generally hampered at the moment of making his stroke by having to check abruptly to avoid touching the net.

Since a well-played drop-shot will be close to the net and low in bounce the effective replies are limited to either a return drop-shot or a cross-court shot which has sufficient speed to pass beyond the opponent's reach. This latter reply is risky as it opens the court to the opponent for a winning stroke if it fails in avoiding him.

COMMON FAULTS

Failure to impart back spin. Gives the opponent plenty of time to reach the ball and offers him an easy stroke.

Choice of the wrong moment. Playing a drop-shot when the opponent is within easy reach of the spot where the ball bounces.

CHAPTER VII

STRATEGY AND TACTICS

The fullest enjoyment and complete success in playing Lawn Tennis is not assured by physical fitness and mastery of stroke production alone. It is not uncommon to see an apparently inferior player defeating one whose stroke production is obviously the better. This anomaly can be traced to the more profitable use of the strokes at the disposal of the less skilled player, his ability to overcome or to profit by conditions of court and weather, and his appreciation of the strength and weaknesses of his opponent, which he exploits to the utmost—in other words **BRAIN WORK**.

This mental part of the game means victory or defeat in the meeting of players equally skilled in hitting the ball. It must be studied from the very outset just as much as stroke production.

This brain work is divided into two portions. Firstly, the consideration of factors, which can be known before actually going into court, and suggesting a general plan of campaign, i.e. Strategy. Secondly, the execution of that plan on the court, i.e. Tactics.

Strategy and tactics dovetail so closely that it is almost impossible to separate them when writing on the subject and no serious attempt has been made to do so in succeeding paragraphs.

Conditions of court.—The conditions of the court, whether wet, soft or hard influence the whole conduct of the game. Balls hit with back spin will keep low, or shoot if the

ground is wet, but on a hard court are liable to sit up. On courts where the ball bounces high top spin is desired to keep the ball into the court, or to make it dive quickly when an opponent advances to the net.

The condition of the court influences the service to a large degree. It is waste of strength to rely on mere speed if the court is so slow as to take a lot of pace out of the stroke. A well placed service which compels the opponent to move far to a flank will prove very effective on a slippery court. On the other hand a slow service on a hard court will prove disastrous.

A slippery court calls for the use of acutely angled shots to an unusual degree since the opponent will have difficulty in stopping and returning for the next stroke, and will eventually suffer strain and exhaustion in doing so.

A slippery court is most unfavourable to a volleying campaign owing to the difficulty of making rapid changes of direction and of recovering position, when the player has been compelled to stretch out to any extent.

On the other hand if the foothold is good it will advantage the volleyer if the court is damp and his approach shot keeps low.

Wind.—It is impossible to neglect the effect of a strong wind which can make timing of the ball and positioning for the stroke difficult. Only a fairly strong wind will affect a ball which is truly hit, but the action of the wind is more obvious, both before and after the ball bounces, when it is not struck truly, or when spin of any kind is imparted to it.

With the wind behind, the player is always in danger of hitting the ball over the base line.

With wind against a player, the ball approaches and bounces with ever-increasing speed, and the player is liable

to return the ball short into the opponent's court, and to be late with his stroke.

Advantage can be taken of a head wind to produce drop-shots which can be most deadly under such conditions, especially if the court is soft.

Lobbing into the wind, the player can aim deep to the back of the court with little fear of hitting out.

When playing against the wind a fairly high medium paced ball which would normally fall out is blown back inside the base line, and keeps the opponent in a state of doubt as to what will happen. A soft hit ball passing just over the net will be blown back quite considerably and is difficult to return.

A cross wind offers its own problems besides those of timing and position—the chief one being the danger of hitting close to the line on that side of the court to which the wind is blowing. It will sometimes be good policy to leave openings to trap the opponent into playing to this side.

On the other side of the court a ball which is apparently going out will frequently be blown inside the line.

The smashing of a lob which the wind is swinging across the court is no easy task, especially if the ball initially is directed outside the court on the windward side.

Sun.—Courts are generally placed so that at normal playing times the sun will shine across them. When play has to go on throughout the whole day it is inevitable that at some time the sun will shine straight down the court. Players find that, when serving, it is possible with practice to overcome the difficulty of throwing-up into the sun, but when dealing with lobs the sun can make matters extremely difficult. Lobbing over an opponent who is facing the sun may not only be a winning stroke, but may also assist to undermine his confidence in smashing. The

opportunity must not be missed through any idea of lack of sportsmanship. It is up to the player facing the sun to decide whether he will go to the net and risk being lobbed under the conditions existing, or whether he will play from the back of the court.

If the player, facing the sun, has a dislike for volleying or smashing, he will be at a greater disadvantage than ever if drawn up to the net, and it will be good tactics to bring this about.

The opponent.—When possible a study of an opponent's strength and weakness will be of great assistance in planning how to play him. It will also prepare the player for strokes and tactics favoured by the opponent, which would otherwise come as a surprise. When it is not possible to acquire this advanced knowledge, the preliminary knock-up and the first few games of the match may be used to study and find out as much as possible about the opponent.

This can only be done by playing strokes with the definite idea of noting the opponent's reaction. Thus, deep balls to the base line will reveal whether the opponent refuses to be driven back and prefers to take a rising ball. Short-length balls will show the opponent's willingness to come to the net or dislike of doing so, his quickness of movement and his volleying ability.

Any preference of the opponent for a particular stroke, such as a forehand cross-court drive, must be noted with a view to giving little scope for it, especially under pressure.

A rally deliberately prolonged may expose a dislike for base-line play and perhaps a lack of stamina.

The possible variations are so many that they would require volumes to consider in detail, and as many more to deal with the counter measures without which all such knowledge would be wasted.

STRATEGY AND TACTICS

It is therefore only practicable to put forward counter measures in one or two cases as a means to outlining the correct approach.

Suppose for instance it has been noted that the opponent has a strong forehand cross-court drive, this should be countered by keeping the ball deep into the centre of the court when the course of play is without any immediate object.

Again, an opponent who relies chiefly on top-spin strokes is likely to prove vulnerable to balls to which back spin is imparted. This does not mean that such spin should be imparted to every ball played to him, but rather that this should be done at moments when it is desired to win points or to break up the rhythm of his game.

Yet one more example is the case of an opponent who excels in smashing. Normally every effort will be made to avoid lobbing him, but when the sun is shining into his eyes a series of lobs might well weaken his confidence in his pet stroke.

A word of warning is necessary against allowing the PLAN to become an embarrassment by interfering with a player's normal game, which should have been built up to suit his physical, mental, and technical make-up.

Drawing the opponent out of his position.—With a number of players the only idea of this kind is to run an opponent from one side of the court to the other. This type of tactics serves its purpose as a means of exhausting the opponent, but does little towards drawing him out of position so that he is unable to cover every possible opening. This cannot as a rule be achieved in one stroke, but requires a series of strokes working to one end.

One of the most uncomfortable positions in the court for a player to find himself during a single is "in the tramlines near the juncture of the service line with the

side line;" here he is neither up to the net nor at the back of the court, while he is a very long way from the other side. It is not, however, good tactics to spend all the time trying to get the opponent into that position. The first step is to draw him away and then to play the stroke which will take him into that position if, and only if, a forceful stroke can be made which will not be easy to return.

Another good tactical move is to draw the opponent right up to the net with the intention of lobbing him, but the stroke drawing him forward must be a difficult one for him to play. A sound preliminary to drawing the opponent forward is to drive him as far back out of the court as possible and then to put a drop-shot just over the net.

Getting the opponent on the wrong foot.—The opportunity for doing this may occur fortuitously or may be brought about by design. It usually happens when the opponent has been drawn over to one side of the court and starts too soon to get back to the centre. Care must be taken not to become overfond of this manœuvre and so to neglect openings which offer outright winners.

Variation of pace.—The value of this is not sufficiently appreciated. A sudden change of pace often causes an opponent to mistime his stroke. Generally speaking a change from medium, or slow, to very fast is most upsetting to the opponent. A change from a series of hard-hit strokes often incites the opponent to over hit in his eagerness to make a winner. Continuous hard hitting, with the occasional introduction of a slow shot, is less likely to take an opponent by surprise than the maintenance of reasonably firm hitting varied occasionally by hard-hit strokes.

Playing down to an inferior opponent.—It is the worst of tactics to play bad or careless strokes just because they are good enough to win at the moment.

One of the greatest players ever seen at Wimbledon used to say that he had never given an opponent a point that he could win himself.

A determination to play the correct stroke every time, and to seize every opportunity of making a winner, must give a player the confidence he requires to seize, without hesitation, any opportunity afforded when playing an opponent of equal, or greater, skill.

On court.—The tactical ability of any player is in proportion to his skill in control and variety of stroke. The player possessed of one method of hitting the ball is obviously at a disadvantage with another, who when circumstances or conditions demand, can readily vary his strokes.

It must not, however, be thought that the use of a variety of strokes is absolutely essential to climbing to the top of the tennis ladder.

Donald Budge says, "Every player should have varieties of spin at his beck for the purpose of variation. Personally, I depend upon *controlled* speed and do not mix spin much with my ground strokes, never using slice and seldom chopping except for the drop-shot."

A tactical manœuvre may be based on a single condition, such as a wet court, or a combination of conditions, as for example a wet court combined with an opponent's dislike of coming up to the net.

The combination of such conditions, if consideration is given to the partial, or complete, ability of the player to take advantage of them is almost infinite. Therefore no attempt can be made to tell the whole story, but it will be helpful to mention some of the most general conditions.

Speed and attack.—An offensive game based on controlled speed is undoubtedly a winning one to which mere steadiness and variation of spin have to yield. It must of course be realized that uncontrolled speed, i.e. slogging without consistency or placing, is not good tactics.

Controlled speed gets the opponent into difficulties and takes full advantage of every winning opening.

The attacking game is built on a foundation of good ground strokes without spin or slice with the ever-present intention of eventual domination from the net.

The development and perfection of this aggressive game calls for constant practice to acquire the necessary control of speed, and the determination not to allow pardonable errors to undermine the spirit of aggression.

Comparatively simple in conception, the offensive game based on controlled speed is open to any player possessed of the aggressive attitude of mind combined with strength, reach and activity. Its perfection which can overcome all unfavourable conditions and can cope with every variety of stroke and tactic is achieved by few.

Defence and Attack.—A purely defensive attitude which is satisfied to get the ball back as often as possible without aim or object is not a tactical manoeuvre.

Just as the mental make-up of the aggressive player will not permit him to wait for the opportunity to attack, so the defensive player inclines to waiting for the opportunity and in the meantime scheming to cause the opponent to make errors or to expose himself to attack.

The player adopting this form of tactics needs to be able to produce a variety of strokes, spin, slice, chop, etc., so that he can avail himself of conditions of ground and weather, and can force his opponent to play the strokes for which he has least liking.

This type of game offers possibilities for any player

in proportion to his control of stroke and command of spin.

Placing.—In placing the ball the player will do so:

- (a) To keep the opponent on the defence.
- (b) To get the opponent out of position.
- (c) To make a winner.

When playing from the back of the court it is well nigh impossible under normal circumstances to hit outright winners. At least it may safely be said that any attempt to do so will not only result in an undue proportion of losers, but will also lead to physical exhaustion.

This equally applies to the opponent on his base line, so that by maintaining a good length and keeping him back a sound defence is established.

The return of the ball to the centre of the base line may be done to close down the angle of return open to the opponent.

The ball may be sent to one corner, or the other, with a definite purpose of drawing the opponent to that side of the court.

To attack a weakness of the opponent, often the back-hand, by hitting on that side continuously, may "play him in." It is generally a better policy to draw him away and then attack the exposed point. This stratagem is often achieved by directing a ball with a low trajectory close to the junction of service and side line in the forehand court and sending the return deep down the opposite side of the court.

Playing against a volleying opponent the primary object is to keep the ball low and so make the opponent volley up. Against an opponent in a good position at the net "the straight-down-the-line-shot" is preferable, the alternative being a lob, but if he is hanging back from the net there will be room for a cross shot to pass him.

The opportunity for making outright winners off the ground generally comes when dealing with short-length balls which do not bounce too low. These forcing strokes should be directed as far away from the opponent and hit with controlled speed, never using greater force than the situation demands, but insuring that, if the opponent reaches them, his stroke will be made under great pressure.

When a player is run out of court he must choose either to play a defensive lob so as to gain time to get back into court or to go for an outright winner by playing a full-blooded drive into any gap available, generally a line. There must be nothing half-hearted about this stroke which will be either a winner or a loser.

When volleying, the placing of the ball should be based on depth and pace when the opponent is not out of position. Short, angled volleys and drop volleys, if not falling short enough, or if anticipated by the opponent, are likely to be killed, and therefore should be played only when he is so far back or so far to one side that he cannot reach them.

Spin.—It is good tactics to impart top spin to balls with a high trajectory making them pitch close to the base line. This will embarrass an opponent who dislikes a high bouncing ball, and particularly so on hard courts.

This type of stroke is of value in forcing an opponent back out of the court before making a drop-shot.

Top spin is of great assistance when making a return against a volleyer as the ball can be made to dip down quickly after passing over the net.

The imparting of back spin makes the ball rise during flight through the air and at the same time causes it to lose speed owing to backward rotation. Therefore strokes with back spin are unsuitable when the opponent is in position at the net. When used against an opponent on

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the base line, back spin may be used with effect to slow down the game and to unsettle his rhythm. The low bounce of balls, to which back spin has been imparted, generally troubles a player who employs the Western grip. As has been noted elsewhere, the tendency of chopped or sliced balls to keep low is greatly emphasized on a soft court, and the volleyer must exploit this fact when playing approach shots which should be directed deep into the opponent's court.

Variation of pace, either with or without spin, can be used to upset the rhythm of the opponent's game, this is particularly so when the opponent has a marked preference for speed.

Stamina plays an important part in any plan for playing a match. Against an opponent of unusual staying power it is wise to plan offensively, unless possessed of such superiority of stroke that he can be made to run about the court without undue fatigue to oneself.

It has been observed that some players appear almost tireless if running from corner to corner along the base line, but react differently if drawn up the court by short balls and then driven back by lobs.

The return of service needs consideration in respect of its speed and the intention of the server. The receiver will stand just inside, or outside, the base line. If the serve is unusually fast and flat the position may be three to four feet behind the base line, whilst for a slow service it is better to advance slightly inside.

When a service breaks wide of the court the receiver who stands well back is liable to be pulled right out of the court. To intercept such services, before the break has gone the whole distance, it is necessary to stand closer in than usual.

Taking the service on the rise has the advantage of giving the server little time to anticipate the return. It

further deters the volleyer from coming up to the net because he fears that the return will come to him too low down, or that he may find the receiver at the net before he can get into position. Taking the service on the rise is, however, at no time easy and is particularly difficult when receiving a fast flat service.

When the server follows in to volley the return must be sufficiently forceful to pass him or to get him into difficulties. The return must be low, and tentative strokes with a high flight are useless. Generally there is room for a passing shot straight down a side line which will draw the opponent out of position if he is to reach it. The receiver must not count on his return being an outright winner, but must be ever on the alert for the return by the opponent; to this end rapid positioning, recovery of balance and return of racket into the "ready position" are essential.

The lob is used sparingly in singles, and generally when the opponent rushes towards the net intent upon volleying.

When the server remains at the back of the court the receiver has time and space for making his reply. Normally it is advisable to attack the opponent's weak side with firm deep shots.

A soft service must be courageously attacked with a view to securing the initiative and with reasonable expectation of making an outright winner.

The occasional use of the drop-shot against an opponent who is slow of foot, or dislikes coming up to the net, is a useful variation of the return of service.

The best position to take up to receive service is as follows:

In forehand court at junction of base and side line when server is right handed.

In forehand court about three feet to the left of

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junction of base and side line when server is left handed.

In backhand court about three feet to right of junction of base and side lines when server is right handed.

In backhand court at junction of base and side lines when server is left handed.

Against a player who is known to specialize in one type of game, e.g. stonewalling, do not adopt similar tactics. Against a hard hitting opponent it is best to try to slow down the general tempo of the game.

A volleyer must, if possible, be kept at the back of the court either by superior ground strokes or by advance to the net.

It is always imperative to seize any opportunity of making a winner and particularly so when opposed to a "stonewaller."

TACTICS DOUBLES

The preceding paragraphs of this chapter deal with tactical considerations of a general nature, and for the most part those applicable to singles.

Certain aspects of the doubles game deserve special mention and chief amongst them is the predominantly offensive nature of the game. Defence of necessity plays its part in resisting the opponents' attack, but all efforts are directed to gaining command at the net, so that the point may be won by volleying or smashing.

Since both sides are imbued with the same idea the game becomes a contest of wit and stroke to pave the way for the approach to the net by compelling the opponents to fall back to the base line.

The positioning of the players in regard to each other, as well as to the opponents, plays a most important part in this contest.

Throughout the rallies the partners endeavour to keep parallel one with another in all parts of the court as by so doing they cover the court to the best advantage and leave no gap in the centre to be penetrated by the opponents.

The task of serving as well as receiving service imposes variations to this rule of keeping parallel.

Position of the server.—The player serving from the right court stands as near as possible to the centre mark on the base line, so that the ball may be directed down the centre of the court and attack the opponent's backhand, at the same time offering the minimum space into which the return can go. As a variation and to surprise the receiver the ball must from time to time be directed away across to the left of the court; when this is done server's partner will be drawn to that flank and the server coming up will have the maximum space to cover.

When serving from the left court the player takes up a position about three to four feet from the centre mark, and directs his service normally on to the opponent's backhand, occasionally varying this by directing balls as close as possible to the centre line.

When serving from either court, it is sometimes profitable to direct the ball straight at the opponent.

Position of server's partner.—The primary task of the server's partner is to deny as much of the court as possible to the opponent's return, thus making it more difficult for him to avoid the server as he advances towards the net. Server's partner therefore stands close to the net and as far towards the centre of the court as is possible without leaving more than a foot or two open down his side of the court.

Position of the receiver.—The position of the receiver has already been described. In doubles by taking a ball as

soon as possible after it has bounced the chances are increased of returning the ball before the server has reached a favourable position to volley. The receiver should therefore take advantage of any weakness of first or second service by "standing in" as much as possible.

Position of receiver's partner.—This to a large extent depends upon the strength of the service being received.

Normally receiver's partner will stand up to the net, but not so close to it that he can easily be lobbed.

When the service is really severe or receiver has difficulty in making a consistently sound return, the forward position of his partner becomes untenable. The latter should then drop back to the base line so as to be level with receiver. Where the first service is very severe, but the second less so, receiver's partner will retreat to the base line whilst his partner takes the former and will go up to the net if the first serve is a fault.

When the receiver's partner initially stands near the net, the receiver endeavours to run in and join him after making the return of service. The run in must be made in rapid strides which shorten as the opponent strikes the ball so that direction can be changed. Every effort must be made to get inside the service line as quickly as possible.

When the receiver's partner has withdrawn to the base line the two players will endeavour to go forward together to a volleying position inside the service line as soon as an opportunity occurs.

Service.—Owing to the initiative given to the server and the difficulties experienced by the receiver it is almost taken for granted that in doubles the loss of service entails the loss of the set.

A good service is therefore essential, this implies a service of adequate speed, length and sometimes spin. A service intended to make "aces" by sheer speed is not

necessarily the best, since no time is given for the server to come up to join his partner, and considerable exhaustion of the server is involved.

A soft service which rises from the ground is in the nature of a gift to the opponents, but a sliced service which keeps close to the ground has been used effectively by many good players.

Volleying.—The primary object in doubles is to force the opponents to hit the ball up so that a winning stroke can be made by killing a volley above the level of the net or by smashing. Until that opportunity occurs every endeavour is made to keep the ball low.

Play generally is directed towards the centre of the court with a view either to create a weakness on a flank or to pass through a gap between the opponents. Play to the centre also closes the court to an angled shot.

Play to a flank gives the opponents more scope for a return, and by drawing the players towards that particular flank upsets the normal formation, as it is found that the player on the flank to which the ball has been sent must move back as well as to the side whilst his partner must move more to the centre of the court and slightly forward.

It is rare for the incoming server to have the chance of winning the point with his first volley of the return. His immediate object is to gain position in the fore-court and to prepare the way for a winning stroke on a later occasion. The first volley must therefore be played low over the net, and if possible at the feet of the opponent.

Lobbing.—The lob is frequently used in doubles to dislodge opponents from the net, and as an alternative for returning service.

An understanding must be reached between partners as regards the responsibility of dealing with lobs, usually the best arrangement is for each player to be responsible

for smashing, or otherwise playing, lobs on his own side. However, where one player excels in smashing, an agreement that he should take everything he comfortably can often proves advantageous.

As soon as a player has made a smash he must return at once into line with his partner who will have remained in the forecourt.

When a lob has been so deep, or so cleverly disguised, that it has passed beyond the reach of the player and bounced near the base line, it will be necessary to run back and deal with it off the ground. When this occurs the striker's partner will also have to run back to the base line to maintain parallel formation.

When two players have been driven back the opponents will entrench themselves at the net, from which they in turn must be dislodged either by lobbing or superior volleying.

Players awaiting a smash by an opponent should get well back behind the service line.

It is comparatively easy to move forward to deal with a short smash, and very difficult to control a fierce deep smash if the return stroke is made as the player is moving back.

Down the middle strokes.—Since, as has been already stated, much of the play in doubles is focussed upon the centre of the court, a complete understanding between partners as to which of them will cover the middle of the court is necessary. When both players are right handed the player in the left court generally accepts the responsibility, as a forehand stroke is involved. Another policy, however, can be adopted if the player in the right court possesses a strong backhand volley, or if he is left handed.

Another method is for the player who hit the last shot to take the centre returns as he is probably following the

flight of the ball more closely than his partner. Whatever the method a complete understanding must be reached by partners.

Smashing.—The spectacular nature of this stroke and the sense of power involved incline people to regard all smashes as final. This is of course far from the truth, especially when two active and alert players are determined to retrieve the ball. From in front of the service line it is possible to smash downwards and to place the ball in a manner that insures a large percentage of winners. From behind the service line the danger of hitting out or into the net is a real one, so that it is wiser to smash firmly to the back of the opponents' court and to recover position at the net.

It must be clearly understood that merely to return the ball from overhead with a soft stroke is deliberately abandoning the initiative, and is likely to give the opponents an outright winner.

Return of service.—The power to wrest from the opponents the initiative inherent in the service depends on the ability to return the service correctly and consistently, and is a DOMINATING FACTOR in doubles.

The difficulties facing the receiver are enhanced because the opponents will have taken up a good volleying position so that a winning return is only possible by a passing shot down the line, or a low forceful stroke down the centre of the court. The risk involved rules out such strokes except very occasionally.

The return of service therefore aims to get the opponents in difficulties, and to enable receiver and his partner to gain a volleying position without fear of the ball being played at their feet.

With this object in view the majority of returns of service are either :

(a) Directed with top spin low towards the feet of the incoming server in the hope of making him lift the ball in returning it and so give his opponents the chance of running in and hitting the volley down.

(b) Lobbing the opponents with the intention of driving them back from the net.

(c) A hard drive down the centre, preferably with top spin, to find the gap between opponents.

(d) A slow return across the incoming server, to pitch well over in his tram-lines and as near the net as possible.

Playing to the score.—One of the greatest champions of all time said that he never gave an opponent a single point, in other words he played to win every point because a point won is always a point to the good.

Whilst this is on the face of it true, it can be, and is, argued that points are of varying importance and that a player should always be aware of this and exert a maximum effort to win vital points.

The idea of playing to the score covers sets, games and individual points. This matter is discussed very fully by Henri Cochet in his book *The Art of Lawn Tennis*.

In regard to sets the problem varies as between a three- and five-set match. In the former case the initial set ranks very high in view of an early lead and the confidence it inspires.

In a five-set match it is desirable to win two of the first three sets, but the initial set has not the same importance as in a three-set match.

In the matter of games the fifth, sixth and seventh games are vital; for example a win at 3-1 means a 4-1 as against 3-2 if the game is lost, and at 4-2 a win means a 5-2 lead as against 4-3. The opportunity of attaining the more favourable positions call for a special effort.

In regard to points the third point is generally the most

important, though the second is scarcely less so as is shown if we consider the difference between 40-0 or 30-15, and of 30-0 or 15 all.

The advantage at 30-0 is not so great as to justify a win or lose attitude involving an immediate attempt to go for an outright winner. At 40-0 a like degree of caution is advisable, but if the point is lost to 40-15 a more aggressive effort is desirable, and a return to a more cautious attitude at 40-30.

A player in arrears at 0-40 or 15-40 must take a reasonable degree of risk, but arriving at 30-40 will await a reasonable opportunity rather than force the pace.

This playing to the score is greatly influenced by the psychology of either player, and is logically considered in the light of the immediate gain and the price to be paid.

CHAPTER VIII

EXERCISES

A great deal that can be done to teach the elementary principles of hitting a tennis ball is left undone owing to the lack of courts and equipment.

It is quite true that without practice and play on the court no one can hope to become a finished lawn tennis player. There are, however, a number of exercises with and without the ball which, if practised, before the actual playing of the game is commenced, will greatly assist stroke production and excite the interest of would-be players.

Many of these exercises can be carried out by a number of pupils simultaneously in open spaces, in large halls and in gymnasia, and are therefore attractive wherever mass teaching is necessary.

Classes are arranged in lines as for physical drill, individuals being spaced so that there is no danger of anyone being struck by a racket.

There is often a tendency to regard this method of learning and teaching of lawn tennis as of little value, but to give one example only, it is on record that a player in India, finding himself marooned far away from any chance of playing, spent many hours "knocking-up" against the wall of his bungalow and shortly after his return to civilization won a championship.

Practice makes perfect only if the practice is of the right kind. Tennis strokes are made up of various bits and pieces, the handling of the racket, the placing of the feet, watching the ball, the use of the weight, etc.

Correctness, if not perfection, of each piece is more easy

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to acquire if tackled separately and stroke production is greatly simplified when the time comes to combine all the pieces in play on the court. Exercises are a splendid medium for perfecting each piece.

SHADOWING

First of such exercises is that of "Shadowing" the strokes in a manner similar to that of "Shadow Boxing." The full value of shadowing is not obtained if the instructions given to a class are in any way skimped. Merely to say "Swing the racket back" and then "Forward" lacks any emphasis on the various movements of different parts of the body, and therefore calls no attention to actions which, if incorrect, will make good stroke production impossible.

The instructor must divide the stroke he is teaching into specific and, so far as is possible, progressive movements and demonstrate each movement as it is described.

So that he may be easily seen, and see, the instructor should stand on a platform facing his class, out of doors a table serves this purpose.

At the start it is advisable to make the pupil watch the demonstration and afterwards to imitate the actions of the instructor. All movements should be done by slow motion to commence with, progressing gradually from one action to another until the stroke is complete. Finally, the stroke can be done in quick time.

When all the strokes have been mastered the exercise can be carried out by change from one stroke to another and back again.

During the slow motion periods the instructor can easily detect incorrect actions and will have time to correct them. When the shadowing is done in quick time he will find difficulty in detecting faults of more than one or two people at the same moment. It is a good arrangement

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if possible to have one assistant or more moving amongst the pupils and pointing out errors.

This correction of mistakes is a very important part of instruction by shadowing as repetition of a faulty action will lead to bad strokes in play.

Instruction in shadowing demands a detailed knowledge of the actions of each stroke and provides valuable practice in the detection of faults. It therefore proves a real help to the instructor when the time comes to diagnose and correct faults in play.

These shadowing actions can be done on the move as well as statically. To do this the instructor tells the class to move "so many paces forward/backward, to the right/left, making the preparatory movement as they go, and completing the stroke at the end of the given number of paces."

The making of strokes on the move, i.e. without stopping, can also be practised by keeping a number of pupils moving round in a continuous circle shadowing the stroke as they move. The co-ordination of the movement of feet and hands and maintenance of balance will be greatly assisted in this way when the time comes to play. The instructions for shadowing suggested in the next paragraph are intended as a guide to the details requiring attention and to a reasonable sequence. The actual wording is a matter of choice.

SHADOWING INSTRUCTIONS

Instructions to be given to a class will be as follows:

Forehand Ready

Stand facing net, hold racket with forehand grip about waist high pointing to the net, weight on the balls of the feet, heels just off the ground, knees slightly bent, eyes concentrating on ball.

Swing back.—Start the swing, turn sideways, bring leading foot towards net and slightly nearer to tramlines than rear foot. Swing racket back about waist high either horizontally, or in a loop, until racket and arm are approximately, in line with the shoulders, racket head above wrist, and pivot body so that the leading shoulder points in the desired direction of stroke, the weight being taken on rear foot.

Swing forward.—Transfer weight to leading foot. Swing racket forward in the plane in which the ball will be struck (or lower), arm and racket almost at full stretch, supplement swing by forward rotation of the striking shoulder and side towards the line of stroke. Strike the ball about waist high and opposite the buckle of the belt or slightly more forward.

Follow-through.—Allow the racket to follow the line of flight of the ball as far as possible, making it rise gradually and finally finishing on the left of the body and about head high. Throughout the follow-through take the weight firmly on the leading leg so that there is no over-balancing, flex the right knee and raise the right heel off the ground to ease the forward thrust of the body.

Backhand Ready

Position as described for forehand. Change grip to backhand. Start swing, turn sideways, pivot the body so that the playing shoulder and arm are taken well to the rear, but not so far that sight is lost of the ball. Bring the leading foot over towards the tramlines and nearer to the net than the rear foot. Weight on the rear foot. Racket head above wrist.

Swing forward.—Commence forward swing with leading shoulder and hip, transferring weight on to leading foot.

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Keep racket head above wrist and in plane (or lower) at which ball will be struck. Swing racket outwards from body so that arm is at full stretch. Strike the ball about waist high opposite leading shoulder or slightly in advance.

Follow-through.—Allow racket to follow flight of ball as far as possible and to rise above the level of the net, finishing above the shoulder and pointing in direction taken by ball. Weight is firmly supported by leading leg. Do not stress body turn at finish, but flex left knee and raise left heel off the ground to ease the forward thrust of the body.

Service, Ready

Take up position with leading foot close to but not touching base line. Leading foot at an angle of about 45 degrees to base line or parallel to it. Rear foot 6 inches to 9 inches behind leading foot. Leading shoulder pointing to service court. Racket about chest level with head pointing to service court.

Balls held in left hand close to racket head and under spot to which ball is thrown up for striking.

Swing back.—Swing the arm and racket far back and upwards in the same manner as when throwing. Transfer the weight slightly on to the rear foot and rotate body to the right.

Swing forward.—Bring the weight forward on to leading foot. Rotate body to left. Strike with a throwing movement of the hand and arm. The racket and arm to be at full stretch when the ball would be struck.

Finish of service.—Allow the racket to follow the flight of the ball as far as possible till it comes down and finishes on the further side of the body from the striking arm.

Another series of exercises can be carried out with the ball and with, or without, racket where space and in some cases a reasonable bouncing surface permits:

(a) Teach the pupil to bounce the ball up and down with the racket—forehand grip—as far out to the right of the body as possible without quite straightening the arm. The strength of the blow to be such that the ball rises regularly to waist height. The player will stand sideways as for the forehand stroke.

This exercise should be commenced by throwing the ball up into the air—NOT BOUNCING IT DOWN—allowing it to hit the ground and then striking it down again when it has reached the top of its bounce. Whilst the ball is rising the racket will be lifted away from it in preparation for striking. The stroke must be made by moving the whole arm and not merely by a wrist movement. This exercise is designed to teach watching the ball rising to the top of the bounce, striking the ball the correct distance from and in correct relation to the body, control of power, the take-away of the racket in preparation for the stroke.

This exercise can be carried out standing in one spot or moving backwards or forwards.

Another variation is for the player to make the ball bounce some six times and on the seventh to make a true forehand stroke directing the ball to another player waiting to receive it, he will act in the same way and then return the ball. In the absence of another player the ball can be hit either against a wall so that it rebounds, or into a wire netting.

(b) Practising the backhand by bouncing the ball exactly as indicated in (a), but holding the racket with the correct backhand grip.

(c) *An exercise without racket.*—Divide the class into pairs with a ball for each pair, stand them opposite

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each other about ten yards apart. The pupil with the ball throws it with an underhand action in a general direction to the right of the partner, sufficiently high for it to bounce about waist high. The receiver moves, turning sideways as for a forehand stroke, and fields the ball at arm's length and at top of bounce. When the ball has been fielded, the receiver *pauses for a moment in statu quo* to observe whether the ball has been intercepted as far from the body as possible and at the best possible height, and whether the body and feet are correct for the forehand stroke. He then recovers position and throws the ball to his opposite number who in turn acts as above.

This exercise can be carried out on the backhand side, but the ball must be fielded with the left hand. The right hand is stretched over with the back of the hand towards the net and closes on the ball as it comes to rest in the left hand. It is inadmissible to catch the ball in the right hand by turning the palm towards the net as this is a false position for the backhand stroke.

The ball should be thrown at varying distances from the receiver so that he is compelled to move sideways, forwards and backwards. The speed at which the ball is thrown can be increased as players gain experience, but must not be too fast to permit the receiver to make the preparatory movements.

The objects of the above are to practise turning sideways and keeping wide of the ball instead of letting it come straight to the player, as is usual in most games. Watching the ball and accustoming the player to note the peak of the bounce. To improve footwork.

(d) *Catching ball against racket.*—The class is arranged in pairs as in (c). In this case one pupil has a racket and the other a ball. The ball is thrown so that it will reach the player with the racket between waist and head high

and on the forehand side. The player receiving the ball turns sideways and puts the racket up to the ball, employing the volleying action to do so, and catches the ball against the centre of the racket with the left hand. The ball should be sufficiently in front and wide of the player to necessitate the left arm being at full stretch.

This exercise cannot be performed on the backhand side.

Object of exercise to practise the player in the task of watching the ball when it does not bounce, to familiarize the player with the contact of the ball on the centre of the racket, to practise keeping wide of the ball and the preparatory actions of volleying.

(e) *Throw-up for service*.—People, who do not originally have trouble with the throw-up of the ball are comparatively few and practice therefore is valuable.

Taking a ball and racket a player should position himself on the base line of a court as if about to serve, or with a line drawn to represent the base line. He will then throw up the ball and permit it to drop without striking it. If correctly thrown up the ball will fall just in front of and outside the leading foot. The movement should be repeated again and again until a large percentage of balls fall in the desired spot. Each time the ball is thrown up the player should commence the back swing of the racket in order to get the feeling of the two hands starting simultaneously on their separate tasks. The swing of the racket need not be completed.

When the throw-up becomes consistently correct the racket should be swung back and up as if to strike the ball without actually doing so, this will insure that the ball is thrown up high enough.

Object of this exercise is to perfect the throw-up of

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the ball for service and to synchronize the work of the two hands.

(f) *Volleying*.—Arrange the class as for exercise (c), but all pupils will have rackets and one ball per pair. Practise volleying by hitting the ball gently about chest high backwards and forwards, great emphasis being laid on the correct volley action, on keeping the racket head above the wrist and on recovering the ready position of racket whilst the ball is going away from the player. Players must try to move quickly to play balls that do not come directly to them.

The backhand volley can be practised in a similar way.

As pupils become proficient the forehand and backhand strokes can be mixed up in rallies.

Interest of this and other exercises can be enhanced by introducing a counting system, one point to opponent if player fails to volley ball or fails to give opponent a fair return, the game being won by the player who gets twenty points first.

Object—development of correct volleying action and control of strength, direction, and height. This exercise can be played in any open space as bounce is immaterial.

(g) *Throwing*. Over-arm throwing is the basis of service and should be practised by boys and especially by girls.

A tennis ball is not heavy enough to be thrown with any force without danger of damage to the thrower's arm. A harmless missile can be made of a small bag containing sand about the weight of a cricket ball, i.e. about $5\frac{1}{2}$ ounces.

Pupils can throw these bags to each other or against a stop netting.

Time spent in developing a really powerful throw will pay a large dividend when the service is finally tackled.

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EXERCISES IN COURT

As many as six pupils at a time can get valuable practice on one court. As beginners they should be arranged three at the net with balls, three behind the base line with rackets (see diagram). It is most important that the throwers stand as near the net as possible so that they have the minimum of difficulty in "feeding" the ball exactly as wanted.

The pupils at the net are instructed to throw balls to the forehand of the pupils with rackets. These latter have to return the ball at a medium pace direct to the thrower who catches it and throws it again to the player with the racket. Hard hitting at this stage must be strictly forbidden. After some minutes the rôle of thrower and striker is changed.

The instructor must insist on the observance on the spirit of this exercise that the thrower gives striker a reasonable chance of playing a forehand shot and that the latter really tries to send the ball back to the thrower.

This exercise can be repeated on the backhand and by alternating the two strokes.

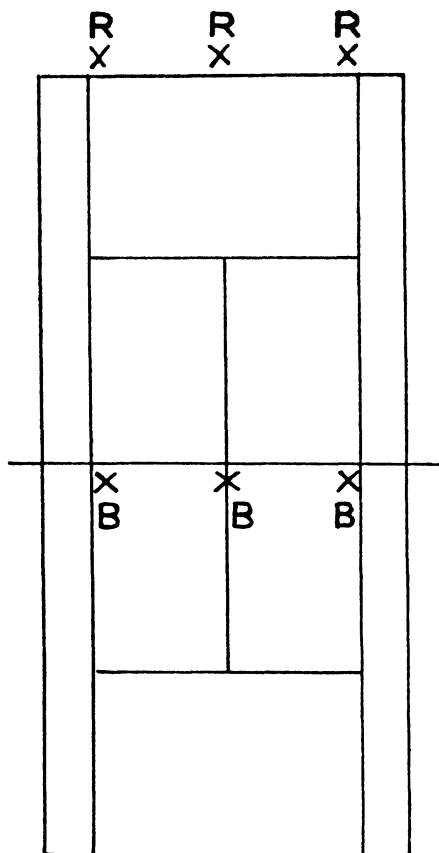
When pupils are able to make this easy return with accuracy they may be permitted to stand behind their respective base lines and hit the ball backwards and forwards to each other. At this stage counting as suggested above makes for interest and concentration.

During this exercise the instructor can keep moving round to correct the strokes of the various players; the simplicity of playing a ball which is thrown facilitates this work of correction.

This exercise is designed to give players control of direction, height and speed of stroke which can only be obtained by good positioning and sound stroke production. Experience shows that most encouraging results can be achieved if these exercises are put into effect with

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scrupulous attention to the accuracy of the throw on the one hand and to careful return of the ball on the other.



R = Player with Racket

B = " " Ball

It will be realized that on any open space where the ball bounces reasonably, and without net or line, pupils can get valuable practice playing in this way.

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EXERCISES IN VOLLEYING

Again six players can be placed on the court, but the players with rackets will come up to the net and the throwers of the ball will stand half way between the base and service line.

At first the ball should be thrown on the agreed side of the player so that it can be struck at a height above the net. The striker will hit the ball quietly down so that it bounces within reach of the thrower, and will recover the racket in the "ready position" as quickly as possible.

The thrower will field the ball and throw it back again, but must take great care not to do so until the player has properly recovered from the first stroke.

As progress is made the volley will be made more difficult by throwing the ball so that it has to be volleyed below the height of the net. Later, volleys can be exchanged between two players each with a racket and throwing of the ball can be abandoned. Finally, a game of volleying can be played by four players with a counting system as suggested previously.

EXERCISE DROP-SHOTS

Again six pupils on the court, with rackets and one ball per pair. Mark lines six feet on either side of net and make pupils play drop-shots backwards and forwards so that the ball never pitches beyond the six feet marks. Count points as previously suggested.

One point to opponent if player puts ball into net. One point to opponent if player hits ball over six foot mark.

Object. To teach delicacy of touch for gentle shots and to practise giving back spin to drop-shots.

WALL EXERCISES

Practice against a wall is valuable if the surface of the ground where the ball bounces is reasonably good.

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Such practice must be intelligent and not merely blind hitting as is too often the case.

On the wall should be marked a line representing the height of the net and above it two other lines one six feet from the ground and another nine feet.

The instructor should, by personal trial, discover how far a ball of medium pace hitting the wall six feet up will rebound, and mark a line on the ground at that distance. The pupil is then advised that his object should be to hit the ball against the wall at various heights and find the strength required to bring the ball back the same distance each time.

An important part of this exercise is the recovery of the racket to the "ready position" whilst the ball is still on its way to the wall so that the next stroke can be executed properly when the ball rebounds.

The practice of just hitting the ball on one side of the body and carrying the racket on that side creates bad habits and must not be allowed.

Volley practice against the wall is an extremely useful exercise if carried out at a speed which permits the player to recover his position and racket between each stroke.

By striking the ball on to the ground and forwards so that it hits the wall as it rises and passes back over the striker's head practice in smashing is possible.

CHAPTER IX

CHOICE OF RACKET. CORRECTION OF FAULTS. CONSTRUCTION OF HARD COURT. DRAW FOR TOURNAMENT. RULES OF LAWN TENNIS

CHOICE OF RACKET

A racket which suits one player may not suit another, but it is generally accepted that a racket should be light in the head, and that the grip should not be so large or so small as to be difficult to control.

A good guide to the balance of a racket is that the balance point should be approximately $12\frac{1}{4}$ inches from the butt. The nearer the balance point is to the butt the lighter in the head the racket will be.

The size of the grip varies from $4\frac{1}{2}$ to 5 inches round the butt or even more—generally speaking $4\frac{1}{2}$ inches for boys and $4\frac{7}{8}$ inches for men.

For girls and ladies $4\frac{1}{4}$ to $4\frac{1}{2}$ inch grips are generally favoured, but in the case of a very small hand a 4-inch grip may be required.

If a player wants a racket which can last at least one season he should select one strung with medium thick gut and not of super-tension. A very tightly strung racket cannot be expected to stand the wear and tear of continuous play under all conditions. A high tension may be attractive but most moderate players do better with strings that get a bit of grip on the ball.

CORRECTION OF FAULTS

In the preceding chapters an attempt has been made to give a picture of the correct stroke production and to point out how some of the usual mistakes are made. This will, it is believed, enable teachers of lawn tennis to put pupils on the right lines and to diagnose their mistakes.

The method of correction must be left to the common sense and imagination of the instructor. Experience shows that it is not possible to say that such is the correction for any particular mistake. For example one pupil who can strike the ball to the left only with his forehand will correct this error if told to place his feet differently, whilst another making the same mistake for the same reason will not react to such instruction, but if told to hit every ball away to his right will then automatically correct his footwork.

Instructors must be prepared to supply different remedies for any fault. They must also guard against the habit of looking for any particular fault whilst ignoring the possible existence of others.

The task of teaching lawn tennis will never be monotonous or dull if the teacher gives his whole mind to making a correct diagnosis and finding the remedy suited to the pupil concerned. The teacher can blame himself as often as the pupil for failure to correct a mistake.

CONSTRUCTION OF A HARD COURT

The making of a hard court is not such a difficult matter as is generally believed. It is not intended to suggest that anyone should lightly undertake a skilled job of excavating and levelling, but where a level site exists the whole can be made above the level of the ground in the following simple way. Dig a trench round the limits of the court, i.e. where the surrounds will eventually come, nine inches

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wide and six inches deep and fill it with concrete. The court must run north to south lengthwise.

On this foundation lay a course of bricks lengthwise, leaving a gap of two inches between the bricks, and complete with another course on top, the bricks being laid end to end. This will make a small retaining wall the top of which will be six inches above ground level.

Put the sockets for the surround poles and for the net poles in position. Do not forget that the net pole sockets must be three feet from the side lines so that the distance between the sockets will be forty-two feet.

Fill the space inside the retaining wall with four inches of coarse cinders and one inch fine; ram, roll and water till the surface becomes hard and level.

The surface can be completed with brick dust or fine gravel or a surface material supplied by any of the well-known makers of courts. This top surface should be put down gradually to a thickness of about half an inch. If it is all put down at once it will be difficult to get it to "KEY." To ensure an even distribution of this fine material it is a good idea to use a straight edge and a couple of laths which are laid on the court where the material is to be spread.

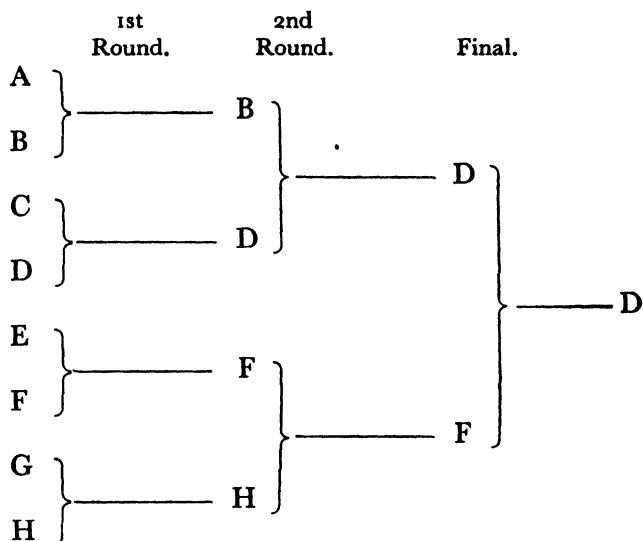
This type of court needs constant attention, but if a non-upkeep surface is required it is as well to consult an expert firm.

If it is felt that a thicker foundation is needed the height of the retaining wall can be increased as desired. A lateral slope from one side of the court to the other for drainage purposes is often desirable, a slope of two inches from one post to the other will in no way affect the play of the court.

DRAW FOR TOURNAMENT

Method of Draw

Part I.—When the Number of Entries is a Power of Two



Part II.—When the Number of Entries is NOT a Power of Two

Method No. 1.—To draw an event when the number of entries is not a power of two, ascertain and write down (1) the number of entries, (2) the next higher power of two, and (3) the number of requisite byes. (See example below.)

Take a sheet of paper containing as many lines as the before-mentioned next higher power of two and number each line consecutively.

Indicate by marginal marks the divisions of the total number into halves, quarters, eighths, sixteenths, etc.

Fix the positions of the byes required by writing the words “a bye” on the lines and in the order mentioned below until the requisite number have been inserted, namely:—

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In a sheet containing—

4 lines—1 bye on line 4.

8 „ —3 byes on lines 8, 4 and 6.

16 „ —7 byes on lines 16, 8, 12, 4, 14, 6 and 10.

32 „ —15 byes on lines 32, 16, 24, 8, 28, 12, 20,
4, 30, 14, 22, 6, 26, 10 and 18.

64 „ —31 byes on lines 64, 32, 48, 16, 56, 24, 40,
8, 60, 28, 44, 12, 52, 20, 36, 4, 62, 30,
46, 14, 54, 22, 38, 6, 58, 26, 42, 10, 50,
18 and 34.

128 „ —63 byes on lines 128, 64, 96, 32, 112, 48,
80, 16, 120, 56, 88, 24, 104, 40, 72, 8,
124, 60, 92, 28, 108, 44, 76, 12, 116,
52, 84, 20, 100, 36, 68, 4, 126, 62, 94,
30, 110, 46, 78, 14, 118, 54, 86, 22,
102, 38, 70, 6, 122, 58, 90, 26, 106,
42, 74, 10, 114, 50, 82, 18, 98, 34 and
66.

Draw the entries by lot and place their names consecutively on the lines unoccupied by the words “a bye” commencing on line 1.

It will be noticed that all byes are entered on lines having an even number, and when the entry on each line having an odd number has been connected by a bracket on the right-hand side to the following entry having an even number the draw will be completed.

Example.—Number of Entries, 17. Next higher power of two and number of lines on sheet of paper, 32. Number of requisite byes, 15.

DRAW FOR TOURNAMENT

	1st Round.	2nd Round.	3rd Round.	Semi- Finals.	Final.
1	A	}			
2	B		}		
3	C	}	C	}	
— 4	a bye (8th)	}		}	
5	D	}	D	}	
6	a bye (12th)	}		}	
7	E	}	E	}	
— 8	a bye (4th)	}		}	
9	F	}	F	}	
10	a bye (14th)	}		}	
11	G	}	G	}	
12	a bye (6th)	}		}	
— 13	H	}	H	}	
14	a bye (10th)	}		}	
15	J	}	J	}	
— 16	a bye (2nd)	}		}	
17	K	}	K	}	
18	a bye (15th)	}		}	
19	L	}	L	}	
— 20	a bye (7th)	}		}	
21	M	}	M	}	
22	a bye (11th)	}		}	
23	N	}	N	}	
— 24	a bye (3rd)	}		}	
25	O	}	O	}	
26	a bye (13th)	}		}	
27	P	}	P	}	
— 28	a bye (5th)	}		}	
29	Q	}	Q	}	
30	a bye (9th)	}		}	
31	R	}	R	}	
— 32	a bye (1st)	}		}	

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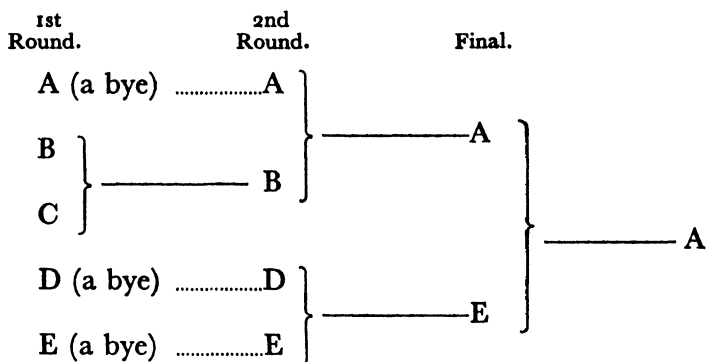
Alternative Method of Draw

Part III.—When the Number of Entries is NOT a Power of Two

Method No. 2.—SERIES I

From 5 to 8 Competitors

With 5, there will be 1 bye at the top, and 2 byes at the bottom, thus:—



With 6, there will be 1 bye at the top, and 1 bye at the bottom.

With 7, 1 bye at the bottom.

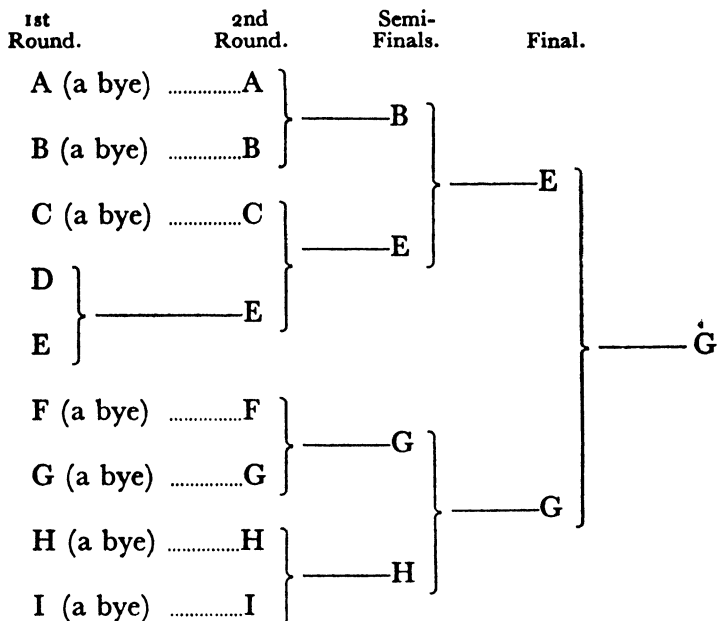
With 8, no byes.

DRAW FOR TOURNAMENT

SERIES 2

From 9 to 16 Competitors

With 9, 3 byes at the top, and 4 byes at the bottom, thus:—



With 10, 3 byes at the top, and 3 byes at the bottom.

With 11, 2 byes at the top, and 3 byes at the bottom.

With 12, 2 byes at the top, and 2 byes at the bottom.

With 13, 1 bye at the top and 2 byes at the bottom.

With 14, 1 bye at the top, and 1 bye at the bottom.

With 15, 1 bye at the bottom.

With 16, no byes.

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SERIES 3

From 17 to 32 Competitors

With 17, 7 byes at the top, and 8 byes at the bottom, thus:—

1st Round.	2nd Round.	3rd Round.	Semi- Finals.	Final.
A (a bye)	A	—A	—D	—D
B (a bye)	B			
C (a bye)	C	—D		
D (a bye)	D			
E (a bye)	E	—F	—H	
F (a bye)	F			
G (a bye)	G	—H		
H }	—H			
I }	—H			
J (a bye)	J	—K	—K	
K (a bye)	K			
L (a bye)	L	—M		
M (a bye).....	M			
N (a bye)	N	—O	—O	
O (a bye)	O			
P (a bye)	P	—O		
Q (a bye)	Q			

RULES OF LAWN TENNIS

With 18, 7 byes at the top, and 7 byes at the bottom.
With 19, 6 byes at the top, and 7 byes at the bottom.
With 20, 6 byes at the top, and 6 byes at the bottom.
With 21, 5 byes at the top, and 6 byes at the bottom.
With 22, 5 byes at the top, and 5 byes at the bottom.
With 23, 4 byes at the top, and 5 byes at the bottom.
With 24, 4 byes at the top, and 4 byes at the bottom.
With 25, 3 byes at the top, and 4 byes at the bottom.
With 26, 3 byes at the top, and 3 byes at the bottom.
With 27, 2 byes at the top, and 3 byes at the bottom.
With 28, 2 byes at the top, and 2 byes at the bottom.
With 29, 1 bye at the top, and 2 byes at the bottom.
With 30, 1 bye at the top, and 1 bye at the bottom.
With 31, 1 bye at the bottom.
With 32, no byes.

And so on, with larger numbers, in like manner.

RULES OF LAWN TENNIS, 1948

The Singles Game

1. The Court shall be a rectangle, 78 feet long and 27 feet wide. It shall be divided across the middle by a net, suspended from a cord or metal cable of a maximum diameter of $\frac{1}{8}$ rd of an inch, the ends of which shall be attached to, or pass over, the tops of two posts, 3 feet 6 inches high, which shall stand 3 feet outside the Court on each side. The height of the net shall be 3 feet at the centre, where it shall be held down taut by a strap not more than 2 inches wide. There shall be a band covering the cord or metal cable and the top of the net for not less than 2 inches nor more than $2\frac{1}{2}$ inches in depth on each side. The lines bounding the ends and sides of the Court shall respectively be called the Base lines and the Side lines. On each side of the net, at a distance of 21 feet

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from it and parallel with it, shall be drawn the Service lines. The space on each side of the net between the service line and the side lines shall be divided into two equal parts called the service courts by the centre service line, which must be 2 inches in width, drawn half-way between, and parallel with, the side lines. Each base line shall be bisected by an imaginary continuation of the centre service line to a line 4 inches in length and 2 inches in width called the centre mark drawn inside the Court, at right angles to and in contact with such base lines. All other lines shall be not less than 1 inch nor more than 2 inches in width, except the base line, which may be 4 inches in width, and all measurements shall be made to the outside of the lines.

NOTE.—In the case of the International Lawn Tennis Championship (Davis Cup) or other Official Championships of the International Federation, there shall be a space behind each base line of not less than 21 feet, and at the sides of not less than 12 feet.

2.—The permanent fixtures of the Court shall include not only the net, posts, cord or metal cable, strap and band, but also, where there are any such, the back and side stops, the stands, fixed or movable seats and chairs round the Court, and their occupants, all other fixtures around and above the Court, and the Umpire, Foot-fault Judge and Linesmen when in their respective places.

3.—The ball shall have a uniform outer surface. If there are any seams they shall be stitchless. The ball shall be more than $2\frac{1}{2}$ inches and less than $2\frac{5}{8}$ inches in diameter, and more than 2 ounces and less than $2\frac{1}{16}$ ounces in weight. The ball shall have a bound of more than 53 inches and less than 58 inches when dropped 100 inches upon a concrete base, and a deformation of more than .265 of an inch and less than .290 of an inch when subjected to a pressure of 18 lb. applied to each end of any diameter.

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All tests for bound, size and deformation shall be made in accordance with the Regulations in the Appendix hereto.

4.—The players shall stand on opposite sides of the net; the player who first delivers the ball shall be called the Server, and the other the Receiver.

5.—The choice of sides and the right to be Server or Receiver in the first game shall be decided by toss. The player winning the toss may choose, or request his opponent to choose:

(a) The right to be Server or Receiver, in which case the other player shall choose the side; or

(b) The side, in which case the other player shall choose the right to be Server or Receiver.

6.—The service shall be delivered in the following manner. Immediately before commencing to serve, the Server shall stand with both feet at rest behind (i.e. further from the net than) the base line, and within the imaginary continuations of the centre-mark and side line. The Server shall then project the ball by hand into the air in any direction and before it hits the ground strike it with his racket, and the delivery shall be deemed to have been completed at the moment of the impact of the racket and the ball. A player with the use of only one arm may utilize his racket for the projection.

7.—The Server shall throughout the delivery of the service:

(a) Not change his position by walking or running.

(b) Maintain contact with the ground.

(c) Keep both feet behind (i.e. further from the net than) the base line.

8.—In delivering the service, the Server shall stand alternately behind the right and left Courts, beginning

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from the right in every game. The ball served shall pass over the net and hit the ground within the Service Court which is diagonally opposite, or upon any line bounding such Court, before the Receiver returns it.

9.—The Service is a fault: (a) If the Server commit any breach of Rules 6, 7 or 8; (b) If he miss the ball in attempting to strike it; (c) If the ball served touch a permanent fixture (other than the net, strap or band) before it hits the ground.

NOTE.—The following interpretation of Rule 7 was approved by the International Federation on March 15, 1929:—

7.—(a) The Server shall not by the following movements of his feet be deemed "to change his position by walking or running," viz.:—

- (i) Slight movements of the feet which do not materially affect the location originally taken up by him.
- (ii) An unrestricted movement of one foot so long as the other foot maintains continuously its original contact with the ground.
- (b) At no time during the delivery of the service (i.e. from the taking up of the stance to the moment of impact of the racket and the ball—see Rule 6) may both feet be off the ground simultaneously.
- (c) The word "feet" means the extremities of the legs below the ankles and at all times during the delivery of the service (as before described) every part of such extremities must be behind (i.e. further from the net than) the base line.

10.—After a fault (if it be the first fault) the Server shall serve again from behind the same half of the Court from which he served that fault, unless it was a fault because he served from behind the wrong half, when he shall be entitled to deliver one service from behind the other half. A fault may not be claimed after the next service has been delivered.

11.—The Server shall not serve until the Receiver is ready. If the latter attempt to return the service, he shall

be deemed ready. If, however, the Receiver signify that he is not ready, he may not claim a fault because the ball does not hit the ground within the limits fixed for the service.

12.—The service is a let: (a) If the ball served touch the net, strap or band, provided the same be otherwise good; (b) If a service or fault be delivered when the Receiver is not ready (see Rule 11). In case of a let, the service counts for nothing, and the Server shall serve again, but a let does not annul a previous fault.

13.—At the end of the first game the Receiver shall become Server, and the Server Receiver; and so on alternately in all the subsequent games of a match. If a player serve out of turn, the player who ought to have served shall serve as soon as the mistake is discovered, but all points scored before such discovery shall be reckoned. If a game shall have been completed before such discovery, the order of service remains as altered. A fault served before such discovery shall not be reckoned.

14.—A ball is in play from the moment at which it is delivered in service (unless a fault or a let), and remains in play till the point is decided.

15.—The Server wins the point: (a) If the ball served touch the Receiver or anything which he wears or carries before it hits the ground; (b) If the Receiver otherwise lose the point as provided by Rule 17.

16.—The Receiver wins the point: (a) If the Server serve two consecutive faults; (b) If the Server otherwise lose the point as provided by Rule 17.

17.—A player loses the point if:

(a) He fail, before the ball in play has hit the ground twice consecutively, to return it directly over the net [except as provided in Rule 21 (1) or (c)]; or

(b) He return the ball in play so that it hits the

ground, a permanent fixture, or other object, outside any of the lines which bound his opponent's Court [except as provided in Rule 21 (a) and (c)]; or

(c) He volley the ball and fail to make a good return even when standing outside the Court; or

(d) He touch or strike the ball in play with his racket more than once in making a stroke; or

(e) He or his racket (in his hand or otherwise) or anything which he wears or carries touch the net, posts, cord or metal cable, strap or band, or the ground within his opponent's Court at any time while the ball is in play; or

(f) He volley the ball before it has passed the net; or

(g) The ball in play touch him or anything that he wears or carries, except his racket in his hand or hands; or

(h) he throws his racket at and hits the ball.

18. If a player commits any act either deliberate or involuntary which, in the opinion of the Umpire, hinders his opponent in making a stroke, the Umpire shall in the first case award the point to the opponent, and in the second case order the point to be replayed.

19.—A ball falling on a line is regarded as falling in the Court bounded by that line.

20. If the ball in play touch a permanent fixture (other than the net, posts, cord or metal cable, strap or band) after it has hit the ground, the player who struck it wins the point; if before it hits the ground his opponent wins the point.

21.—It is a good return:

(a) If the ball touch the net, posts, cord or metal cable, strap or band, provided that it passes over any of them and hits the ground within the Court; or

(b) If the ball, served or returned, hit the ground

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within the proper Court and rebound or be blown back over the net, and the player whose turn it is to strike reach over the net and play the ball, provided that neither he nor any part of his clothes or racket touch the net, posts, cord or metal cable, strap or band or the ground within his opponent's Court, and that the stroke be otherwise good; or

(c) If the ball be returned outside the post, either above or below the level of the top of the net, even though it touch the post, provided that it hits the ground within the proper Court; or

(d) If a player's racket pass over the net after he has returned the ball, provided the ball pass the net before being played and be properly returned; or

(e) If a player succeeded in returning the ball, served or in play, which strikes a ball lying in the Court.

NOTE TO RULE 21.—If for the sake of convenience a doubles Court be equipped with singles posts for the purposes of a singles game, then the doubles posts and those portions of the net, cord or metal cable and band outside such singles posts shall be permanent fixtures.

22.—In case a player is hindered in making a stroke by anything not within his control, except a permanent fixture of the Court, or except as provided for in Rule 18, the point shall be replayed.

23.—If a player wins his first point, the score is called 15 for that player; on winning his second point, the score is called 30 for that player; on winning his third point, the score is called 40 for that player, and the fourth point won by a player is scored game for that player except as below:

If both players have won three points, the score is called deuce; and the next point won by a player is scored advantage for that player. If the same player win the next point, he wins the game; if the other

player wins the next point the score is again called deuce; and so on, until a player wins the two points immediately following the score at deuce, when the game is scored for that player.

24. The player who first wins six games wins a set except as below:

If both players have won five games, the score is called games-all, and the next game won by a player is scored advantage game for that player. If the same player wins the next game, he wins the set; if the other player wins the next game, the score is again called games-all; and so on until a player wins two games more than his opponent, when the set is scored for that player.

25.—The players shall change sides at the end of the first, third and every subsequent alternate game of each set, and at the end of each set unless the total number of games in such set be even, in which case the change is not made until the end of the first game of the next set.

26.—The maximum number of sets in a match shall be 5, or, where women take part, 3.

27.—Except where otherwise stated, every reference in these Rules to the masculine includes the feminine gender.

28.—In matches where an Umpire is appointed, his decision shall be final; but where a Referee is appointed, an appeal shall lie to him from the decision of an Umpire on a question of law, and in all such cases the decision of the Referee shall be final.

The Referee, in his discretion, may at any time postpone a match on account of darkness or the condition of the ground or the weather. In any case of postponement the previous score and previous occupancy of Courts shall hold good, unless the Referee and the players unanimously agree otherwise.

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29.—Play shall be continuous from the first service till the match be concluded; provided that after the third set, or when women take part, the second set, either player is entitled to a rest, which shall not exceed 10 minutes, or in countries situated between Latitude 15 degrees North and Latitude 15 degrees South, 45 minutes, and provided further that when necessitated by circumstances not within the control of the players, the Umpire may suspend play for such a period as he may consider necessary. If play be suspended and be not resumed until a later day the rest may be taken only after the third set (or when women take part the second set) of play on such later day, completion of an unfinished set being counted as one set. These provisions shall be strictly construed, and play shall never be suspended, delayed or interfered with for the purpose of enabling a player to recover his strength or his wind, or to receive instruction or advice. The Umpire shall be the sole judge of such suspension, delay or interference, and after giving due warning he may disqualify the offender.

NOTE.—Any Nation is at liberty to modify the first provision in Rule 29 or omit it from its regulations governing tournaments, matches or competitions held in its own country, other than the International Lawn Tennis Championship (Davis Cup).

The Doubles Game

30.—The above Rules shall apply to the Doubles Game except as below.

31.—For the Doubles Game, the Court shall be 36 feet in width, i.e. $4\frac{1}{2}$ feet wider on each side than the Court for the Singles Game, and those portions of the singles side lines which lie between the two service lines shall be called the service side lines. In other respects, the Court shall be similar to that described in Rule 1, but the portions of the singles side lines between the base line and

service line on each side of the net may be omitted if desired.

32.—The order of serving shall be decided at the beginning of each set as follows:—

The pair who have to serve in the first game of each set shall decide which partner shall do so and the opposing pair shall decide similarly for the second game. The partner of the player who served in the first game shall serve in the third; the partner of the player who served in the second game shall serve in the fourth, and so on in the same order in all the subsequent games of a set.

33.—The order of receiving the service shall be decided at the beginning of each set as follows:—

The pair who have to receive the service in the first game shall decide which partner shall receive the first service, and that partner shall continue to receive the first service in every odd game throughout that set. The opposing pair shall likewise decide which partner shall receive the first service in the second game and that partner shall continue to receive the first service in every even game throughout that set. Partners shall receive the service alternately throughout each game.

34.—If a partner serve out of his turn, the partner who ought to have served shall serve as soon as the mistake is discovered, but all points scored, and any faults served before such discovery, shall be reckoned. If a game shall have been completed before such discovery, the order of service remains as altered.

35.—If during a game the order of receiving the service is changed by the receivers it shall remain as altered until the end of the game in which the mistake is discovered, but the partners shall resume their original order of receiving in the next game of that set in which they are receivers of the service.

36.—The service is a fault as provided for by Rule 9,

or if the ball served touch the Server's partner or anything which he wears or carries, but if the ball served touch the partner of the Receiver or anything which he wears or carries, before it hits the ground, the Server wins the point.

37.—The ball shall be struck alternately by one or other player of the opposing pairs, and if a player touches the ball in play with his racket in contravention of this Rule, his opponents win the point.

Appendix

Regulations for making tests specified in Rule 3

- (i) Unless otherwise specified all tests shall be made at a temperature of approximately 68° Fahrenheit and any ball tested shall be at that temperature throughout when the test is commenced.
- (ii) Unless otherwise specified the limits are for a test conducted in an atmospheric pressure resulting in a barometric reading of approximately 29·95 inches.
- (iii) Other climatic standards may be fixed for localities where the average temperature and/or average barometric pressure at which the game is being played differ materially from 68° Fahrenheit and 29·95 inches respectively.

Applications for such adjusted standards may be made by any National Association to the International Lawn Tennis Federation and if approved shall be adopted for such localities.

A table of such adjusted standards shall be added to the Appendix from time to time as they may be adopted.

- (iv) In all tests for diameter a ring gauge shall be used, consisting of a metal plate, preferably non-corrosive, of a uniform thickness of one-eighth of an inch, in which there are two circular openings 2·575 inches and 2·675 inches in diameter respectively. The inner surface of the gauge shall have a convex profile with a radius of one-sixteenth of an inch. The ball shall not drop through the smaller opening by its own weight and shall drop through the larger opening by its own weight.
- (v) In all tests for deformation conducted under Rule 3, the machine designed by Percy Herbert Stevens and patented

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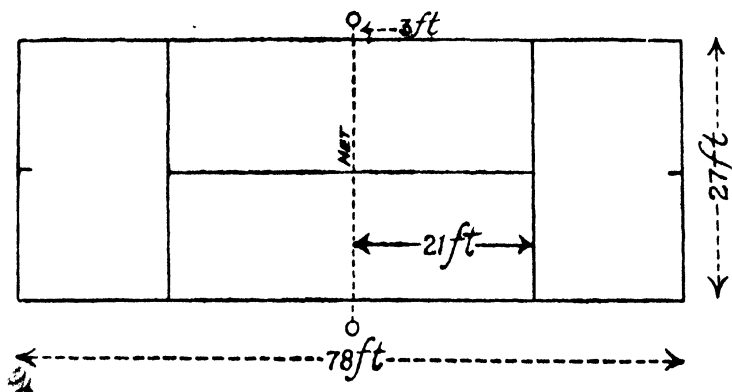
in Great Britain under Patent No. 230250, together with the subsequent additions and improvements thereto, shall be employed or such other machine which is approved by a National Association and gives equivalent readings to the Stevens machine.

- (vi) Immediately before any ball is tested, it shall be dropped four times from a height of one hundred inches on to a concrete base.
- (vii) To ascertain the deformation of any ball, three readings shall be taken, one each of three diameters at right angles to one another, so chosen that initially neither platen of the machine shall be in contact with any part of the cover seam. The average of these three readings shall be the deformation reading.
- (viii) After the ball has been placed in position, the contact weight applied, the beam brought to the pointer level, the pointers set at zero, and the test weight placed on the beam, the pressure shall then be applied to the ball by turning the hand wheel at a uniform speed, and exactly five seconds shall elapse from the instant the beam leaves its seat until it is brought to the pointer level, whereupon the turning shall cease and the reading shall be taken.

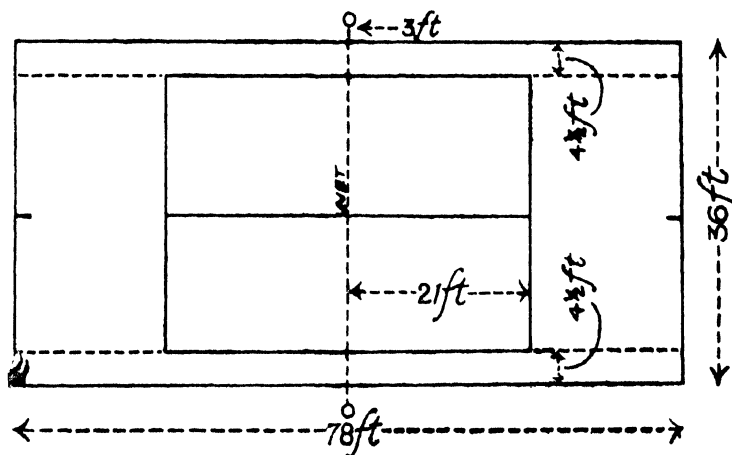
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Plans of the Courts

The Singles Court

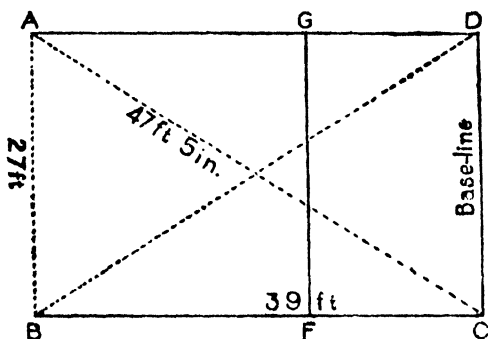


The Doubles Court



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How to Mark Out a Court



As a doubles Court practically includes every line to be found in a singles Court, first take the measurements for the latter. Determine the position of the net, and fix in the line chosen two pegs, 27 feet apart (at the points A and B). Then take two measurements and attach their respective ends to the pegs A and B. On the first, which will measure the diagonal of the Court, take a length of 47 feet 5 inches, on the other 39 feet; pull both taut so that at these distances they meet in a point C. This gives one corner of the Court. At the point F, 21 feet from B, put in a peg to mark the end of the service line. The other corner D, and the other end of the service line G, may be found by repeating the process. The same measurements on the other side of the net will complete the boundaries of the Court. By prolonging the base lines 4 feet 6 inches in each direction, and joining the four new points thus obtained, the side lines of a doubles Court are obtained. It only remains to mark the central line, by joining the middle points of the service lines. If a doubles Court alone is required, the interior side lines need not be prolonged to meet the base lines. In all cases the net posts must stand at a distance of 3 feet from the side lines, and therefore if

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a singles game is to be played on a doubles Court, the net (unless the posts are shifted and a singles Court net is used) should be stayed up to the right height by means of singles posts placed at a distance of 3 feet from the singles Court side lines. These are obtainable from all makers of lawn tennis implements.

KNOTTY POINTS

Addenda to the Rules of Lawn Tennis (Approved by the Council of the Lawn Tennis Association)

1.—If, whilst the ball is in play, a player catches it on his racket, he loses the point.

2.—If a player jumps over the net into his opponent's Court while the ball is in play, he loses the point.

3.—Any stationary object lying on the surface of the Court shall be deemed to be part of such surface, but if the ball in play strikes an object moving along or above the surface of the Court, a "let" must be allowed.

4.—If an Umpire erroneously calls "fault" and at once corrects himself and cries "play," and the receiver fails to return the ball, a "let" must be allowed.

5.—If two players in a handicap play at the wrong odds, the match stands, unless the Referee or anyone acting on his behalf has marked the handicap incorrectly on the score sheet when putting the match into Court, in which case the loser may claim to have the match replayed, unless the mistake in the odds has been in his favour. Such claim must be made within reasonable time.

6.—A similar decision must be given if two players neglect to play advantage sets when one of the conditions of the events in which they are competing is that advantage sets should be played.

7.—In No. 8 of the Rules of Lawn Tennis, the word "behind" means "the ground behind," and refers to the

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feet of the Server. The ball in service may be struck anywhere in the air within reach of the Server's racket.

8.—If the first service is a fault and the second service is correct and it becomes necessary to replay the point either under the provisions of Rule 22 or if the Umpire is unable to decide the point, the Server shall serve again and the previous fault shall be annulled.

